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STRUCTURE FILE UPDATES: 22 APR 2007 HIGHEST RN 931834-80-9  
DICTIONARY FILE UPDATES: 22 APR 2007 HIGHEST RN 931834-80-9

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=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:05:02 ON 24 APR 2007  
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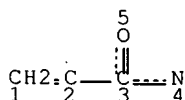
FILE COVERS 1907 - 24 Apr 2007 VOL 146 ISS 18  
FILE LAST UPDATED: 23 Apr 2007 (20070423/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L13 STR



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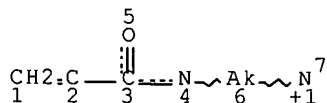
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 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 5

## STEREO ATTRIBUTES: NONE

L14 STR



## NODE ATTRIBUTES:

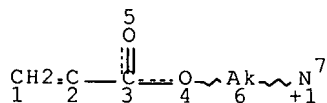
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 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 7

## STEREO ATTRIBUTES: NONE

L15 STR



## NODE ATTRIBUTES:

CHARGE IS E+1 AT 7  
 CONNECT IS E1 RC AT 5  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 7

## STEREO ATTRIBUTES: NONE

L16 SCR 2043

L19 14702 SEA FILE=REGISTRY ABB=ON 79-06-1/CRN  
 L21 2502 SEA FILE=REGISTRY ABB=ON 79-39-0/CRN  
 L22 142 SEA FILE=REGISTRY SSS FUL L13 AND L14 AND L15 AND L16  
 L24 64 SEA FILE=REGISTRY ABB=ON L22 AND (L19 OR L21)  
 L27 51 SEA FILE=HCAPLUS ABB=ON L24  
 L28 37 SEA FILE=HCAPLUS ABB=ON L27(L) PREP/RL  
 L30 1 SEA FILE=HCAPLUS ABB=ON L28 AND TERPOLY?  
 L31 1 SEA FILE=HCAPLUS ABB=ON L27 AND TERPOLY?  
 L34 52 SEA FILE=REGISTRY ABB=ON L24 AND 3-5/NC

L35 23 SEA FILE=REGISTRY ABB=ON L24 NOT 1-200/NR  
 L36 19 SEA FILE=REGISTRY ABB=ON L34 NOT 1-200/NR  
 L37 23 SEA FILE=REGISTRY ABB=ON L35 OR L36  
 L38 38 SEA FILE=HCAPLUS ABB=ON L37  
 L39 26 SEA FILE=HCAPLUS ABB=ON L38(L) PREP/RL  
 L40 26 SEA FILE=HCAPLUS ABB=ON L30 OR L31 OR L39

=> D L40 BIB ABS IND HITSTR 1-26

L40 ANSWER 1 OF 26 HCAPLUS. COPYRIGHT 2007 ACS on STN  
 AN 2006:1350161 HCAPLUS Full-text  
 DN 146:86860  
 TI Cationic cosmetic compositions containing cationic polymer base  
 IN Murakami, Hideo; Mukoyama, Takahiro  
 PA Osaka Yuki Kagaku Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006347918	A	20061228	JP 2005-174036	20050614
PRAI	JP 2005-174036		20050614		

AB The invention relates to a cationic cosmetic composition suitable for use in a hair composition providing softness to the hair, wherein the composition is characterized by containing a polymer base prepared from a monomer  $R1C(:CH2)COAR2N+(R3)(R4)R5\cdot B-$  ( $R1 = H, Me$ ;  $R2 = C1-4$  alkylene;  $R3, R4 = H, C1-4$  alkyl;  $R5 =$  organic group;  $A = O, NH$ ;  $B- =$  anion). For example, a cationic base polymer was prepared from N,N-dimethylaminoethyl methacrylate methylchloride 95, N,N-dimethylaminoethyl acrylate 3, and diacetoneacrylamide 2 g with water 250 and di-Me 2,2'-azobis(2-methylpropionate) 0.5 g. The cationic base polymer 3 parts was combined with cocamidopropyl betaine 30, polyoxyethylene alkyl ether sulfate sodium salt 30, 1,3-butylene glycol 5, water 28.75, coco fatty acid diethanolamide 2, polyoxyethylene oleyl ether 0.5, fragrance (THP-11176) 0.5, Me paraben 0.1, phenoxyethanol 0.1, disodium edetate 0.05 parts to give a shampoo composition

CC 62-3 (Essential Oils and Cosmetics)  
 ST cationic polymer base hair cosmetic  
 IT Shampoos  
     (cationic cosmetic compns. containing cationic polymer base)  
 IT Polyelectrolytes  
     (cationic; cationic cosmetic compns. containing cationic polymer base)  
 IT Hair preparations  
     (conditioners; cationic cosmetic compns. containing cationic polymer base)  
 IT Hair preparations  
     (mousses, conditioner; cationic cosmetic compns. containing cationic polymer base)  
 IT Hair preparations  
     (sprays, moisturizing; cationic cosmetic compns. containing cationic polymer base)  
 IT 69418-26-4P, Acrylamide-N,N-Dimethylaminoethyl acrylate methylchloride copolymer 99588-80-4P 913964-08-6P **917507-23-4P**  
 RL: COS (Cosmetic use); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
     (cationic cosmetic compns. containing cationic polymer base)  
 IT **917507-23-4P**  
 RL: COS (Cosmetic use); IMF (Industrial manufacture); SPN (Synthetic

preparation); BIOL (Biological study); **PREP (Preparation)**; USES  
(Uses)

(cationic cosmetic compns. containing cationic polymer base)

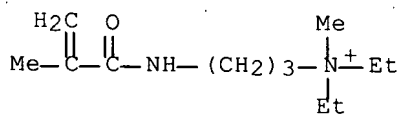
RN 917507-23-4 HCAPLUS

CN 1-Propanaminium, N,N-diethyl-N-methyl-3-[(2-methyl-1-oxo-2-propen-1-yl)amino]-, chloride (1:1), polymer with butyl 2-methyl-2-propenoate, 2-(dimethylamino)ethyl 2-propenoate, 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propen-1-yl)oxy]ethanaminium chloride (1:1) (CA INDEX NAME)

CM 1

CRN 913964-09-7

CMF C12 H25 N2 O . Cl

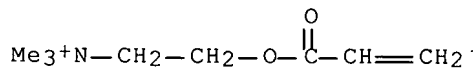


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

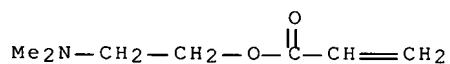


● Cl<sup>-</sup>

CM 3

CRN 2439-35-2

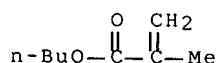
CMF C7 H13 N O2



CM 4

CRN 97-88-1

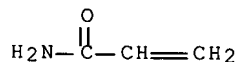
CMF C8 H14 O2



CM 5

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:1147702 HCAPLUS Full-text  
 DN 145:477416  
 TI Cosmetic base materials containing cationic polymers  
 IN Murakami, Hideo; Mukoyama, Takahiro  
 PA Osaka Yuki Kagaku Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006298860	A	20061102	JP 2005-125288	20050422
PRAI	JP 2005-125288		20050422		

AB The invention relates to a cationic cosmetic base material suitable for use in a hair cosmetic composition providing softness to hair, wherein the base material is characterized by consisting of a polymer obtained from a monomer  $\text{CH}_2:\text{C}(\text{R}_1)\text{COAR}_2\text{N}^+(\text{R}_3)(\text{R}_4)(\text{R}_5)\cdot\text{B}^-$  ( $\text{R}_1 = \text{H}, \text{Me}$ ;  $\text{R}_2 = \text{C1-4 alkylene}$ ;  $\text{R}_3, \text{R}_4 = \text{H}, \text{C1-4 alkyl}$ ;  $\text{R}_5 = \text{organic group}$ ;  $\text{A} = \text{O}, \text{NH}$ ;  $\text{B}^- = \text{anion.}$ ). For example, a cationic polymer, was prepared from N,N-dimethylaminoethylacrylate methylchloride salt 90, acrylamide 10, and azobisisobutyronitrile 0.1 g in water 200 g to formulate a hair cosmetic base material.

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 36

ST quaternary ammonium polymer prepn hair cosmetic base

IT Polyelectrolytes

(cationic; cosmetic base materials containing cationic polymers)

IT Hair preparations

(cosmetic base materials containing cationic polymers)

IT 57123-14-5P 69418-26-4P 99588-80-4P 913964-08-6P  
913964-10-0P 913964-13-3P

RL: COS (Cosmetic use); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

(cosmetic base materials containing cationic polymers)

IT 913964-10-0P

RL: COS (Cosmetic use); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

(cosmetic base materials containing cationic polymers)

KATHLEEN FULLER EIC1700 571/272-2505

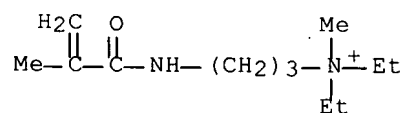
RN 913964-10-0 HCAPLUS

CN 1-Propanaminium, N,N-diethyl-N-methyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with butyl 2-methyl-2-propenoate, 2-(dimethylamino)ethyl 2-propenoate, 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 913964-09-7

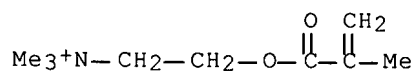
CMF C12 H25 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

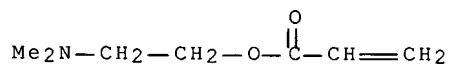
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 2439-35-2

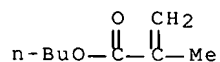
CMF C7 H13 N O2



CM 4

CRN 97-88-1

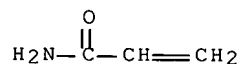
CMF C8 H14 O2



CM 5

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:231352 HCAPLUS Full-text

DN 142:298799

TI Powder coating material, water-soluble cationic polymer composition, procedure for their production and their use as flocculants.

IN Herth, Gregor; Kubiak, Bernd; Steiner, Norbert; Benghozi, Eric

PA Stockhausen GmbH, Germany

SO Ger. Offen., 15 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10337763	A1	20050317	DE 2003-10337763	20030814
	AU 2004270327	A1	20050317	AU 2004-270327	20040528
	CA 2532792	A1	20050317	CA 2004-2532792	20040528
	WO 2005023884	A1	20050317	WO 2004-EP5807	20040528
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1656402	A1	20060517	EP 2004-739439	20040528
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1835980	A	20060920	CN 2004-80023248	20040528
	BR 2004013504	A	20061010	BR 2004-13504	20040528
	JP 2007502334	T	20070208	JP 2006-522899	20040528
	NO 2006000954	A	20060227	NO 2006-954	20060227
PRAI	DE 2003-10337763	A	20030814		
	WO 2004-EP5807	W	20040528		

AB A powder coating material prepared from  $\geq 2$  cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture [first polymer with mol. weight  $> 1,000,000$  is prepared by cationic polymerization of quaternized (meth)acrylates or/and (meth)acrylamides in the presence of the second polymer, the second with mol. weight  $< 1,000,000$  is prepared by polymerization of diallyldimethylammonium chloride or/and quaternized (meth)acrylates or/and (meth)acrylamides]. Thus, mixing 390 g

KATHLEEN FULLER EIC1700 571/272-2505

aqueous solution of acrylamide, 164 g of water, 210 g of Versenex 80, adding 325 g of dimethylammoniumpropyl methacrylamide (CH<sub>2</sub>Cl<sub>2</sub> salt) and 90 g of poly(diallyldimethylammonium chloride), UV-curing 25 min in the presence of 2,2'-azobis(2-methylpropionamidin)dihydrochloride, drying 90 min at 100° gave a product used as a flocculants for sludge treatment.

- IC ICM C08L033-10  
ICS C08L033-26; C08J003-02; C02F001-56; C02F011-14
- CC 37-6 (Plastics Manufacture and Processing)
- ST powder coating material water soluble cationic polymer compn flocculant; cationic polymn quaternized methacrylate diallyldimethylammonium chloride flocculant manuf
- IT Polyamides, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic, ionomers, first copolymer; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT Paper  
(manufacture; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT Flocculants  
Thickening agents  
Wastewater treatment sludge  
(powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT Coating materials  
(powder; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT Drinking waters  
(treatment; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT Polymers, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water-soluble, cationic; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT 140-01-2, Versenex 80  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT 158366-38-2DP, sulfate-exchanged 847901-39-7DP, sulfate-exchanged  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(first copolymer; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT 26062-79-3P, Diallyldimethylammonium chloride homopolymer 68039-13-4P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(second copolymer; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)
- IT 847901-39-7DP, sulfate-exchanged



RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(first copolymer; powder coating material prepared from cationic, water-soluble polymers is used as a flocculant, for treatment of drinking water and in paper manufacture)

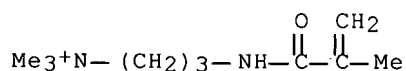
RN 847901-39-7 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 51410-72-1

CMF C10 H21 N2 O . Cl

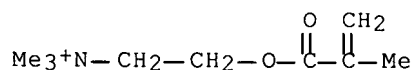


● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

CMF C9 H18 N O2 . Cl

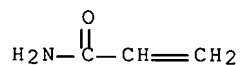


● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:198249 HCAPLUS Full-text

DN 140:236224

TI Cationic polyelectrolyte with good environmental compatibility

IN Steiner, Norbert; Herth, Gregor; Fischer, Werner; Redlof, Horst

KATHLEEN FULLER EIC1700 571/272-2505

PA Stockhausen G.m.b.H. & Co. K.-G., Germany  
 SO Ger. Offen., 11 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	DE 10240797	A1	20040311	DE 2002-10240797	20020830	
	WO 2004020490	A1	20040311	WO 2003-EP8428	20030730	
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	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	AU 2003273393	A1	20040319	AU 2003-273393	20030730	
	EP 1539845	A1	20050615	EP 2003-755548	20030730	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK		
	US 2005242045	A1	20051103	US 2004-518595	20041221	
PRAI	DE 2002-10240797	A	20020830			
	WO 2003-EP8428	W	20030730			

AB The invention concerns cationic water-soluble polyelectrolytes, in particular **terpolymers**, prepared by dispersion polymerization of a (meth)acrylamide with a quaternized (meth)acrylamide derivative, a quaternized (meth)acrylic acid derivative and/or a hydrolysis-stable cationic monomer so that the polyelectrolyte exhibits a toxicity index  $Fi = (QTP - 2QME)/10 \leq 1$  with QTP = total cationic charge of the polymer and QME = is charge portion of ester-type monomers. These polymers are useful for dewatering of wastewater treatment sludge, for purification of water, and in paper industry. A typical polymer was manufactured by radical polymerization of 240 g 50% aqueous acrylamide solution with 350 g 80% 2-(dimethylamino)ethyl acrylate Me chloride salt.

IC ICM C08F020-56  
 ICS C08F020-36; C08F020-60; C02F001-52; C02F011-14

CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 60, 61

ST nontoxic cationic polyelectrolyte dewatering settling sludge; acrylamide dimethylaminoethyl acrylate methyl chloride salt copolymer manuf; paper industry nontoxic cationic polyelectrolyte; water purifn nontoxic cationic polyelectrolyte

IT Paper  
 Water purification  
 (cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)

IT Polyelectrolytes  
 (cationic; cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)

IT Wastewater treatment sludge  
 (dewatering; cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)

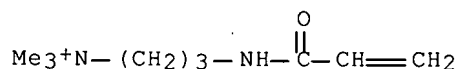
IT Quaternary ammonium compounds, preparation  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymers; cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)

- IT 496810-06-1P, Acrylamide-3-acrylamidopropyltrimethylammonium chloride-2-acryloyloxyethyltrimethylammonium chloride copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)
- IT 69418-26-4P, Acrylamide-2-acryloyloxyethyltrimethylammonium chloride copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)
- IT 496810-06-1P, Acrylamide-3-acrylamidopropyltrimethylammonium chloride-2-acryloyloxyethyltrimethylammonium chloride copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (cationic polyelectrolytes with low toxicity for dewatering wastewater treatment sludge, water purification and paper industry)
- RN 496810-06-1 HCAPLUS
- CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

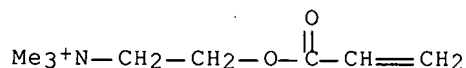
CMF C9 H19 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

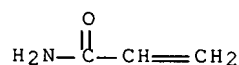
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:491284 HCAPLUS Full-text  
DN 139:53485  
TI High molecular weight cationic and anionic polymers comprising  
zwitterionic monomers  
IN Coffey, Martin J.; Govoni, Steven T.; Begala, Arthur J.; Gray, Ross T.;  
Murray, Patrick G.  
PA Ondeo Nalco Company, USA  
SO PCT Int. Appl., 50 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003051941	A1	20030626	WO 2002-US37874	20021126
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003155091	A1	20030821	US 2001-23370	20011217
	US 6709551	B2	20040323		
	AU 2002352927	A1	20030630	AU 2002-352927	20021126
	NZ 532798	A	20040924	NZ 2002-532798	20021126
	EP 1463767	A1	20041006	EP 2002-789887	20021126
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	BR 2002014910	A	20041130	BR 2002-14910	20021126
	CN 1604921	A	20050406	CN 2002-825245	20021126
	JP 2005511869	T	20050428	JP 2003-552818	20021126
	NO 2004003053	A	20040917	NO 2004-3053	20040716
PRAI	US 2001-23370	A	20011217		
	WO 2002-US37874	W	20021126		

AB High mol. weight water-soluble polymers comprised of zwitterionic, nonionic and cationic or anionic monomer units, are used in papermaking processes. A test charged polymer, acrylamide-N,N-dimethyl-N-(3-methacrylamidopropyl)-N-(3-sulfopropyl)ammonium betaine-dimethylaminoethyl acrylate Me chloride copolymer (98.5:1.0:0.5 mol%) was prepared as a drainage/retention aid for papermaking.

IC ICM C08F026-06

CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 43

ST cationic zwitterionic nonionic polymer papermaking; anionic zwitterionic nonionic polymer papermaking; flocculant polyelectrolyte papermaking

IT Flocculants  
Newsprint

Paper

(preparing high mol. weight charged polymers as retention aids for papermaking)

IT 548485-85-4P, Acrylamide-N,N-dimethyl-N-(3-methacrylamidopropyl)-N-(3-sulfopropyl)ammonium betaine-dimethylaminoethyl acrylate methyl chloride copolymer 548485-86-5P, Acrylamide-2-acrylamido-2-methyl-1-propanesulfonic acid sodium salt-N,N-dimethyl-N-(3-methacrylamidopropyl)-N-(3-sulfopropyl)ammonium betaine copolymer

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); **PREP (Preparation)**; USES (Uses)

(preparing high mol. weight charged polymers as retention aids for papermaking)

IT 548485-85-4P, Acrylamide-N,N-dimethyl-N-(3-methacrylamidopropyl)-N-(3-sulfopropyl)ammonium betaine-dimethylaminoethyl acrylate methyl chloride copolymer

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); **PREP (Preparation)**; USES (Uses)

(preparing high mol. weight charged polymers as retention aids for papermaking)

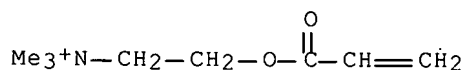
RN 548485-85-4 HCAPLUS

CN 1-Propanaminium, N,N-dimethyl-N-[3-[(2-methyl-1-oxo-2-propenyl)amino]propyl]-3-sulfo-, inner salt, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

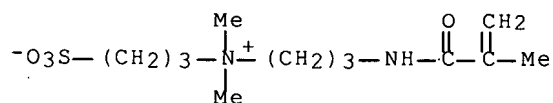


● Cl<sup>-</sup>

CM 2

CRN 5205-95-8

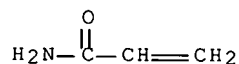
CMF C12 H24 N2 O4 S



CM 3

CRN 79-06-1

CMF C3 H5 N O



RE.CNT 1      THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:197606 HCAPLUS Full-text  
DN 138:222007  
TI Water-soluble polymer dispersions and their production method  
IN Takeda, Hisao; Sugiyama, Toshiaki  
PA Hymo Corporation, Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2003073572	A	20030312	JP 2001-262545	20010831
PRAI	JP 2001-262545		20010831		

AB Title dispersions comprise  $\geq 1$  water soluble polymer particles with particle diameter  $\leq 100 \mu\text{m}$  selected from cationic, amphoteric, and nonionic polymers and  $\geq 1$  each dispersing agents of aqueous salt solution soluble cationic and/or nonionic polymers and natural cationic polymers. Thus, 67.4 g 50% aqueous acrylamide and 115.0 g 80% aqueous acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of 16.7 g 30% aqueous polydiallyldimethylammonium chloride with cationic equivalent 5.07 meq/g and weight average mol. weight 700,000 and 41.6 g 15% aqueous locust bean gum with weight average mol. weight 150,000 to give 25.0% polymer particle dispersion with particle diameter  $\leq 10 \mu\text{m}$ , dispersion viscosity 200 mPa-s, and weight average mol. weight 9,000,000.

IC ICM C08L101-14  
ICS B01D021-01; C08F002-20; C08F012-30; C08F020-34; C08F020-52;  
C08F020-60; C08F028-02

CC 35-4 (Chemistry of Synthetic High Polymers).

ST water soluble polymer dispersion prepn; polydiallyldimethylammonium chloride locust bean gum dispersing agent; acrylamide acryloyloxyethyltrimethylammonium chloride copolymer particle prepn

IT Polyelectrolytes  
(amphoteric; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polyelectrolytes  
(cationic, dispersing agents or polymer particles; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Dispersing agents  
(cationic, optionally natural; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Quaternary ammonium compounds, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(polymers, polymer particles or dispersing agents; preparation of water-soluble

polymer dispersions in presence of dispersing agent mixts.)

IT Dispersing agents  
(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polymers, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(water-soluble, dispersing agents or polymer particles; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium chloride copolymer  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(dispersing agent or polymer particle; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 26062-79-3P, Polydiallyldimethylammonium chloride 54076-97-0P, Polyacryloyloxyethyltrimethylammonium chloride 72018-12-3DP, N-Vinyl formamide homopolymer, amidized 114815-82-6DP, Acrylonitrile-N-vinyl formamide copolymer, amidized 220226-78-8P, Acryloyloxyethyltrimethylammonium chloride-N-vinyl formamide copolymer 501007-65-4P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9002-98-6, Epomin P 1050 9003-39-8, Poly(vinyl pyrrolidone) 9004-34-6D, Cellulose, derivs. 9004-67-5, Methyl cellulose 9005-25-8, Starch, uses 9005-25-8D, Starch, derivs. 9012-76-4, Chitosan 9012-76-4D, Chitosan, derivs. 26426-80-2, Isobam  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 101060-97-3P 108388-79-0P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 109578-73-6P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride copolymer 140668-04-8P 154820-29-8P 172992-58-4P 496809-90-6P 496810-06-1P 501007-67-6P 501007-68-7P 501010-86-2P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 154820-29-8P 496810-06-1P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

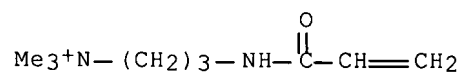
RN 154820-29-8 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

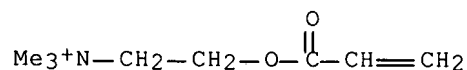
CMF C9 H19 N2 O . Cl



CM 2

CRN 44992-01-0

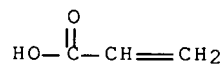
CMF C8 H16 N O2 . Cl



CM 3

CRN 79-10-7

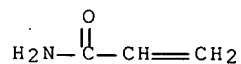
CMF C3 H4 O2



CM 4

CRN 79-06-1

CMF C3 H5 N O



RN 496810-06-1 HCAPLUS

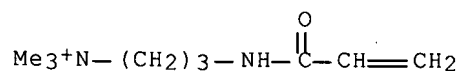
CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride,  
polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-  
propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

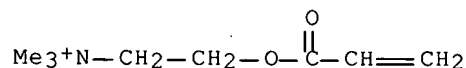


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

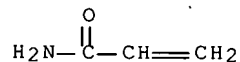
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:197605 HCAPLUS Full-text

DN 138:222006

TI Water-soluble polymer dispersions and their production method

IN Takeda, Hisao; Sugiyama, Toshiaki

PA Hymo Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF .

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2003073567	A	20030312	JP 2001-262536	20010831
PRAI	JP 2001-262536		20010831		

AB Title dispersions comprise ≥1 water soluble polymer particles with particle diameter ≤100 μm selected from cationic, amphoteric, and nonionic polymers and ≥1 each dispersing agents of aqueous salt solution soluble natural polymers and polycondensed polymers. Thus, 67.4 g 50% aqueous acrylamide and 115.0 g 80% aqueous acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of 10.0 g 50% aqueous dimethylamine- epichlorohydrin copolymer with cationic equivalent 7.33 meq/g and mol. weight 2000 and 37.5 g 20% aqueous Me cellulose to give a polymer dispersion with average polymer particle diameter

KATHLEEN FULLER EIC1700 571/272-2505

- ≤10 μm, dispersion viscosity 110 mPa-s, and mol. weight of polymer particle 9,000,000.
- IC ICM C08L101-14  
ICS B01D021-01; C08F002-20; C08F012-30; C08F020-34; C08F020-52;  
C08F020-60; C08F026-02; C08F028-02
- CC 35-4 (Chemistry of Synthetic High Polymers)
- ST water soluble polymer dispersion prepn; acrylamide  
acryloyloxyethyltrimethylammonium chloride copolymer particle prepn;  
dimethylamine epichlorohydrin copolymer methyl cellulose dispersing agent
- IT Polyelectrolytes  
(amphoteric; preparation of water-soluble polymer dispersions in presence  
of dispersing agent mixts.)
- IT Polyelectrolytes  
(cationic; preparation of water-soluble polymer dispersions in presence of  
dispersing agent mixts.)
- IT Polyamines  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(dispersing agents; preparation of water-soluble polymer dispersions in  
presence of dispersing agent mixts.)
- IT Quaternary ammonium compounds, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymers; preparation of water-soluble polymer dispersions in presence of  
dispersing agent mixts.)
- IT Dispersing agents  
(preparation of water-soluble polymer dispersions in presence of dispersing  
agent mixts.)
- IT Polymers, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(water-soluble, dispersing agents or polymer particles; preparation of  
water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT 25988-97-0P, Dimethylamine-epichlorohydrin copolymer 52722-38-0P,  
Ammonia-dimethylamine-epichlorohydrin copolymer 72452-26-7P,  
Dimethylamine-epichlorohydrin-pentaethylene hexamine copolymer  
496809-89-3P 501007-66-5P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in  
presence of dispersing agent mixts.)
- IT 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9004-34-6D, Cellulose,  
derivs. 9004-67-5, Methyl cellulose 9005-25-8, Starch, uses  
9005-25-8D, Starch, derivs. 9012-76-4, Chitosan 9012-76-4D, Chitosan,  
derivs.  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in  
presence of dispersing agent mixts.)
- IT 9003-05-8P, Acrylamide homopolymer 69418-26-4P, Acrylamide-  
acryloyloxyethyltrimethylammonium chloride copolymer 74153-51-8P,  
Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride copolymer  
101060-97-3P 108388-79-0P, Acrylamide-acryloyloxyethylbenzyltrimethylammo  
nium chloride-acryloyloxyethyltrimethylammonium chloride copolymer  
109578-73-6P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium  
chloride copolymer 179816-63-8P 179816-64-9P 328384-71-0P  
496810-06-1P 501007-68-7P 501010-86-2P 501019-56-3P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of water-soluble polymer dispersions in presence of dispersing

agent mixts.)

IT 328384-71-0P 496810-06-1P 501019-56-3P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

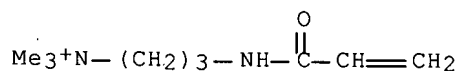
RN 328384-71-0 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

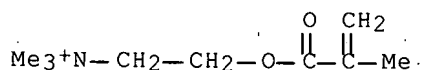
CMF C9 H19 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

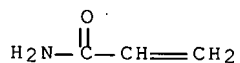
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



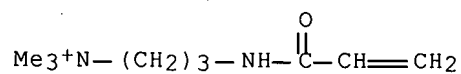
RN 496810-06-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

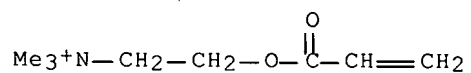
CMF C9 H19 N2 O . Cl



CM 2

CRN 44992-01-0

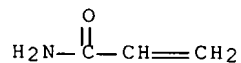
CMF C8 H16 N O2 . Cl



CM 3

CRN 79-06-1

CMF C3 H5 N O



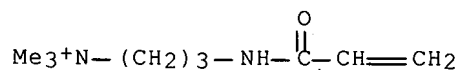
RN 501019-56-3 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

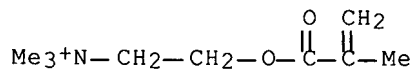
CMF C9 H19 N2 O . Cl



CM 2

CRN 5039-78-1

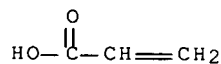
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-10-7

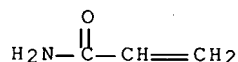
CMF C3 H4 O2



CM 4

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:196514 HCAPLUS Full-text

DN 138:222004

TI Water-soluble polymer dispersions and their production method

IN Takeda, Hisao; Sugiyama, Toshiaki

PA Hymo Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2003073566	A	20030312	JP 2001-262535	20010831
PRAI	JP 2001-262535		20010831		

AB Title dispersions comprise ≥1 water soluble polymer particles with particle diameter ≤100 μm selected from cationic, amphoteric, and nonionic polymers and ≥ 1 each dispersing agents of aqueous salt solution soluble polymers and polycondensed polymers. Thus, 67.4 g 50% aqueous acrylamide and 115.0 g 80% aqueous acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of 25.0 g 20% aqueous polyacryloyloxyethyltrimethylamm onium chloride

KATHLEEN FULLER EIC1700 571/272-2505

- with cationic equivalent 5.25 meq/g and mol. weight 1,200,000 and 7.5 g 50% aqueous dimethylamine-epichlorohydrin copolymer with cationic equivalent 7.33 meq/g and mol. weight 2000 to give a dispersion with viscosity 180 mPa-s and mol. weight of polymer particle 9,000,000.
- IC ICM C08L101-14  
ICS C08F002-20; C08F220-34; C08F220-56; C08F226-04; C08F228-02
- CC 35-4 (Chemistry of Synthetic High Polymers)
- ST water soluble polymer dispersion prepn; acrylamide  
acryloyloxyethyltrimethylammonium chloride copolymer particle prepn;  
polyacryloyloxyethyltrimethylammonium chloride dimethylamine  
epichlorohydrin copolymer dispersing agent
- IT Polyelectrolytes  
(amphoteric; preparation of water-soluble polymer dispersions in presence  
of dispersing agent mixts.)
- IT Polyelectrolytes  
(cationic; preparation of water-soluble polymer dispersions in presence of  
dispersing agent mixts.)
- IT Polyamines  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(dispersing agents; preparation of water-soluble polymer dispersions in  
presence of dispersing agent mixts.)
- IT Quaternary ammonium compounds, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(polymers, dispersing agents or polymer particles; preparation of water-  
soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Dispersing agents  
(preparation of water-soluble polymer dispersions in presence of dispersing  
agent mixts.)
- IT Polymers, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(water-soluble, dispersing agents or polymer particles; preparation of  
water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium chloride  
copolymer  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(dispersing agent or polymer particle; preparation of water-soluble polymer  
dispersions in presence of dispersing agent mixts.)
- IT 25988-97-0P, Dimethylamine-epichlorohydrin copolymer 26062-79-3P,  
Diallyldimethylammonium chloride homopolymer 52722-38-0P,  
Ammonia-dimethylamine-epichlorohydrin copolymer 54076-97-0P,  
Polyacryloyloxyethyltrimethylammonium chloride 72018-12-3DP, N-Vinyl  
formamide homopolymer, amidinized 114815-82-6DP, Acrylonitrile-N-vinyl  
formamide copolymer, amidinized 220226-78-8P,  
Acryloyloxyethyltrimethylammonium chloride-N-vinyl formamide copolymer  
496809-89-3P, Dimethylamine-epichlorohydrin-trimethylamine copolymer  
501007-65-4P, Acryloyl morpholine-acryloyloxyethyltrimethylammonium  
chloride copolymer 501007-66-5P, Dimethylaminopropylamine-  
epichlorohydrin-pentaethylenhexamine copolymer  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in  
presence of dispersing agent mixts.)
- IT 9002-98-6, EPomin P 1050 26426-80-2, Isobam

RL: MOA (Modifier or additive use); USES (Uses)

(dispersing agent; preparation of water-soluble polymer dispersions in presence

of dispersing agent mixts.)

IT 9003-05-8P, Acrylamide homopolymer 35429-19-7P 101060-97-3P, Acrylamide-acryloyloxyethyltrimethylammonium chloride-methacryloyloxyethyltrimethylammonium chloride copolymer 108388-79-0P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 109578-73-6P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride copolymer 140668-04-8P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride-methacryloyloxyethyltrimethylammonium chloride copolymer 179816-63-8P, Acrylamide-acrylic acid-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 179816-64-9P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride-itaconic acid copolymer 496809-90-6P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride-itaconic acid copolymer **496810-06-1P**, Acrylamide-acryloylaminopropyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 501007-67-6P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloylaminopropyltrimethylammonium chloride copolymer 501007-68-7P

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 72452-26-7P, Dimethylamine-epichlorohydrin-pentaethylene hexamine copolymer

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 9003-39-8, Polyvinyl pyrrolidone

RL: MOA (Modifier or additive use); USES (Uses)

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT **496810-06-1P**, Acrylamide-acryloylaminopropyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

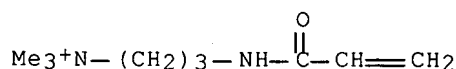
RN 496810-06-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

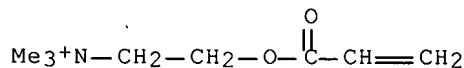


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

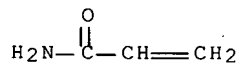
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:194656 HCAPLUS Full-text

DN 138:222002

TI Water-soluble polymer dispersions and their production method

IN Takeda, Hisao; Sugiyama, Toshiaki

PA Hymo Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2003073569	A	20030312	JP 2001-262538	20010831
PRAI	JP 2001-262538		20010831		

AB Title dispersions comprise  $\geq 1$  water soluble polymer particles with particle diameter  $\leq 100 \mu\text{m}$  selected from cationic, amphoteric, and nonionic polymers and  $\geq 1$  each aqueous salt solution soluble dispersing agents of polycondensed polymers and polyalcs. Thus, 250 g 50% aqueous acrylamide was polymerized in the presence of 10.5 g 50% aqueous dimethylamine-epichlorohydrin copolymer with mol. weight 2000 and 3.2 g polyethylene glycol with mol. weight 500 to give 21.0% polymer dispersion with particle diameter  $\leq 10 \mu\text{m}$ , dispersion viscosity 120 mPa-s, and weight average mol. weight 9,000,000.

IC ICM C08L101-14

ICS C08F002-20; C08F220-34; C08F220-56; C08F226-04; C08F228-02; C08K005-053

CC 35-4 (Chemistry of Synthetic High Polymers)

ST water soluble polymer dispersion prepn; polyacrylamide particle dimethylamine epichlorohydrin copolymer polyethylene glycol dispersing agent

IT Polyelectrolytes

KATHLEEN FULLER EIC1700 571/272-2505



(amphoteric; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polyelectrolytes  
(cationic; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polyoxyalkylenes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polyamines  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(dispersing agents; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polyoxyalkylenes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(polyalc. ethers, dispersing agents; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Alcohols, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(polyhydric, dispersing agents; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Quaternary ammonium compounds, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymers; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polymers, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(water-soluble, dispersing agents or polymer particles; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 25988-97-0P, Dimethylamine-epichlorohydrin copolymer 52722-38-0P, Ammonia-dimethylamine-epichlorohydrin copolymer 72452-26-7P, Dimethylamine-epichlorohydrin-pentaethylene hexamine copolymer 496809-89-3P 501007-66-5P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(dispersing agent; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 50-70-4, Sorbitol, uses 56-81-5, Glycerin, uses 57-55-6, Propylene glycol, uses 107-21-1, Ethylene glycol, uses 115-77-5, Pentaerythritol, uses 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 31694-55-0, Polyethylene glycol glycerin ether 53694-15-8, Polyethylene glycol sorbitol ether  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; preparation og water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT 9003-05-8P, Polyacrylamide 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium chloride copolymer 69726-15-4P, Acrylamide-acrylic acid-methacryloyloxyethyltrimethylammonium chloride copolymer 101060-97-3P 108388-79-0P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 109578-73-6P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride copolymer 140668-04-8P 154820-29-8P 179816-63-8P 328384-71-0P 496809-90-6P 501013-34-9P

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT **154820-29-8P 328384-71-0P**

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

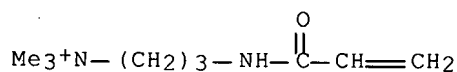
RN 154820-29-8 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

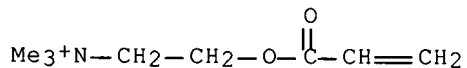


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

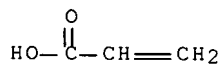


● Cl<sup>-</sup>

CM 3

CRN 79-10-7

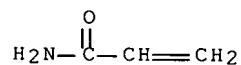
CMF C3 H4 O2



CM 4

CRN 79-06-1

CMF C3 H5 N O



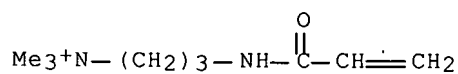
RN 328384-71-0 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

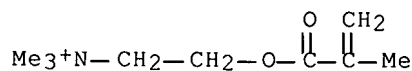
CMF C9 H19 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

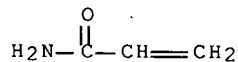
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:194655 HCAPLUS Full-text

DN 138:222001

TI Water-soluble polymer dispersions and their production method

IN Takeda, Hisao; Sugiyama, Toshiaki

PA Hymo Corporation, Japan

KATHLEEN FULLER EIC1700 571/272-2505

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003073568	A	20030312	JP 2001-262537	20010831
PRAI	JP 2001-262537		20010831		

AB Title dispersions comprise  $\geq 1$  water soluble polymer particles with particle diameter  $\leq 100 \mu\text{m}$  selected from cationic, amphoteric, and nonionic polymers and  $\geq 1$  each dispersing agents of aqueous salt solution soluble cationic natural polymers and polyalcs. Alternatively, title dispersions comprise  $\geq 1$  water soluble polymer particles with particle diameter  $\leq 100 \mu\text{m}$  of cationic and/or amphoteric polymers and  $\geq 1$  each dispersing agents of aqueous salt solution soluble cationic natural polymers and polyalcs. Thus, 67.4 g 50% aqueous acrylamide and 115.0 g 80% aqueous acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of 3.8 g polyethylene glycol glycerin ether and 37.8 g 20% aqueous cationized starch to give 25% (monomer based) polymer dispersion with particle diameter  $\leq 10 \mu\text{m}$ , viscosity 180 mPa, and weight average mol. weight 8,500,000.

IC ICM C08L101-14

ICS B01D021-01; C08F002-20; C08F012-30; C08F020-34; C08F020-52;  
C08F020-60; C08F026-02; C08F028-02

CC 35-4 (Chemistry of Synthetic High Polymers)

ST water soluble polymer dispersion prepn; acrylamide  
acryloyloxyethyltrimethylammonium chloride copolymer particle prepn;  
polyethylene glycol glycerin ether cationized starch dispersing agent

IT Polyelectrolytes

(amphoteric; preparation of water-soluble polymer dispersions in presence  
of dispersing agent mixts.)

IT Dispersing agents

(cationic, natural polymers; preparation of water-soluble polymer  
dispersions in presence of dispersing agent mixts.)

IT Polyelectrolytes

(cationic, polymer particles or dispersing agents; preparation of water-  
soluble polymer dispersions in presence of dispersing agent mixts.)

IT Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in  
presence of dispersing agent mixts.)

IT Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(polyalc. ethers, dispersing agent; preparation of water-soluble polymer  
dispersions in presence of dispersing agent mixts.)

IT Alcohols, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(polyhydric, dispersing agents; preparation of water-soluble polymer  
dispersions in presence of dispersing agent mixts.)

IT Quaternary ammonium compounds, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymers; preparation of water-soluble polymer dispersions in presence of  
dispersing agent mixts.)

IT Polymers, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(water-soluble; preparation of water-soluble polymer dispersions in presence of

dispersing agent mixts.)

IT 50-70-4, Sorbitol, uses 56-81-5, Glycerin, uses 57-55-6, Propylene glycol, uses 107-21-1, Ethylene glycol, uses 115-77-5, Pentaerythritol, uses 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9004-34-6D, Cellulose, derivs. 9004-67-5, Methyl cellulose 9005-25-8, Starch, uses 9005-25-8D, Starch, derivs. 9012-76-4, Chitosan 9012-76-4D, Chitosan, derivs. 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 31694-55-0, Polyethylene glycol glycerin ether 53694-15-8, Polyethylene glycol sorbitol ether  
 RL: MOA (Modifier or additive use); USES (Uses)

(dispersing agent; preparation of water-soluble polymer dispersions in presence

of dispersing agent mixts.)

IT 9003-05-8P, Acrylamide homopolymer 35429-19-7P, Acrylamide-methacryloyloxyethyltrimethylammonium chloride copolymer 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium chloride copolymer 101060-97-3P 108388-79-0P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 109578-73-6P 140668-04-8P 179816-63-8P 496809-90-6P  
**496810-06-1P** 501007-67-6P 501007-68-7P 501015-50-5P  
 RL: IMF (Industrial manufacture); **PREP (Preparation)**

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

IT **496810-06-1P**

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)

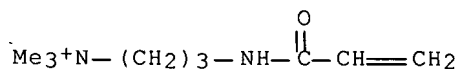
RN 496810-06-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

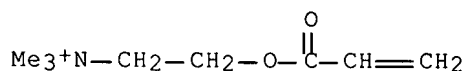


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

CMF C8 H16 N O2 : Cl

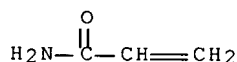


● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:194654 HCAPLUS Full-text  
 DN 138:222000  
 TI Water-soluble polymer dispersions and their production method  
 IN Takeda, Hisao; Sugiyama, Toshiaki  
 PA Hymo Corporation, Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2003073565	A	20030312	JP 2001-262533	20010831
PRAI	JP 2001-262533		20010831		

AB Title dispersions comprise ≥1 water soluble polymer particles with particle diameter ≤100 μm selected from cationic, nonionic, and amphoteric polymers and ≥1 each aqueous salt solution soluble dispersing agents of cationic polymers and polyalcs. Alternatively, title dispersions comprise water soluble polymer particles with particle diameter ≤100 μm of cationic and/or amphoteric polymers and ≥1 each aqueous salt solution soluble dispersing agents of nonionic polymers and polyalcs. Thus, 67.4 g 50% aqueous acrylamide and 115.0 g 80% aqueous acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of 31.3 g 20% aqueous polyacryloyloxyethyltrimethylammonium chloride with cationic equivalent 5.25 meq/g and mol. weight 1,200,000 and 3.8 g polyoxyethylene glycerin ether with mol. weight 600 to give 25.0%-solids copolymer solution with particle diameter ≤10 μm, viscosity of dispersion solution 130 mPa-s, and weight average mol. weight 7,500,000.

IC ICM C08L101-14

ICS C08F002-20; C08F220-34; C08F220-56; C08F226-04; C08F228-02;  
 C08K005-053

CC 35-4 (Chemistry of Synthetic High Polymers)

ST water soluble polymer dispersion prepn; acrylamide  
 acryloyloxyethyltrimethylammonium chloride copolymer particle;  
 polyacryloyloxyethyltrimethylammonium chloride polyoxyethylene glycerin  
 ether dispersing agent

IT Polyelectrolytes

- (amphoteric; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Dispersing agents  
Polyelectrolytes  
(cationic; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Polyoxyalkylenes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Dispersing agents  
(nonionic; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Polyoxyalkylenes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(polyalc. ethers, dispersing agents; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Alcohols, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(polyhydric, dispersing agents; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Quaternary ammonium compounds, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(polymers, dispersing agents or polymer particles; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Dispersing agents  
(preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT Polymers, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(water-soluble, polymer particle or dispersing agents; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium chloride copolymer  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(dispersing agent or polymer particle; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT 7398-69-8P, Diallyldimethylammonium chloride 54076-97-0P, Polyacryloyloxyethyltrimethylammonium chloride 72018-12-3DP, N-Vinylformamide homopolymer, amidinized 114815-82-6DP, Acrylonitrile-N-vinyl formamide copolymer, amidinized 220226-78-8P, Acryloyloxyethyltrimethylammonium chloride-N-vinylformamide copolymer 501007-65-4P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(dispersing agent; preparation of water-soluble polymer dispersions in presence of dispersing agent mixts.)
- IT 50-70-4, Sorbitol, uses 56-81-5, Glycerin, uses 115-77-5, Pentaerythritol, uses 9002-98-6, Epomin P 1050 9003-39-8, Polyvinyl pyrrolidone 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 26426-80-2, Isobam 31694-55-0, Polyethylene glycol glycerin ether 53694-15-8, Polyethylene glycol sorbitol ether  
RL: MOA (Modifier or additive use); USES (Uses)

(dispersing agent; preparation of water-soluble polymer dispersions in presence

of dispersing agent mixts.)

IT 9003-05-8P, Acrylamide homopolymer 74153-51-8P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride copolymer 101060-97-3P 108388-79-0P, Acrylamide-acryloyloxyethylbenzyltrimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride copolymer 109578-73-6P, Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride copolymer 140668-04-8P **154820-29-8P** 179816-63-8P **328384-71-0P** **496810-06-1P** 501007-67-6P 501007-68-7P 501013-28-1P

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(polymer particle; preparation of water-soluble polymer dispersions in presence

of dispersing agent mixts.)

IT **154820-29-8P** **328384-71-0P** **496810-06-1P**

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(polymer particle; preparation of water-soluble polymer dispersions in presence

of dispersing agent mixts.)

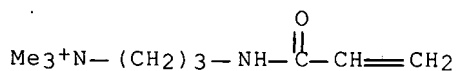
RN 154820-29-8 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

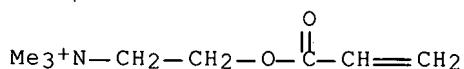


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

CMF C8 H16 N O2 . Cl



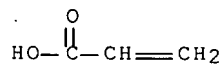
● Cl<sup>-</sup>

CM 3

CRN 79-10-7

CMF C3 H4 O2

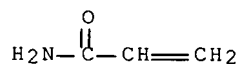




CM 4

CRN 79-06-1

CMF C3 H5 N O



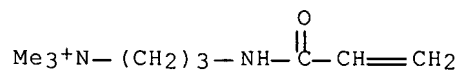
RN 328384-71-0 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

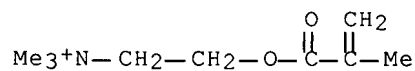
CMF C9 H19 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

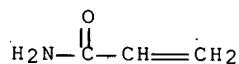
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

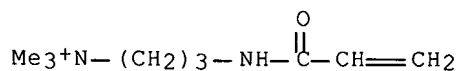
CMF C3 H5 N O



RN 496810-06-1 HCAPLUS  
CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

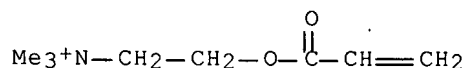
CM 1

CRN 45021-77-0  
CMF C9 H19 N2 O . Cl



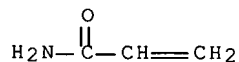
CM 2

CRN 44992-01-0  
CMF C8 H16 N O2 . Cl



CM 3

CRN 79-06-1  
CMF C3 H5 N O



L40 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:111093 HCAPLUS Full-text  
DN 138:153961  
TI Water soluble polymer dispersions and their production method  
IN Takeda, Hisao; Sugiyama, Toshiaki  
PA Hymo Corporation, Japan

KATHLEEN FULLER EIC1700 571/272-2505

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003041137	A	20030213	JP 2001-226033	20010726
PRAI	JP 2001-226033		20010726		

AB Title dispersions comprise  $\geq 1$  water soluble polymer particles with particle diameter  $\leq 100 \mu\text{m}$  selected from cationic, nonionic, and amphoteric polymers and aqueous salt solution-soluble natural polymers as dispersing agents. Thus, 59.0 g aqueous 50% acrylamide and 100.4 g aqueous 80% acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of 30.3 g aqueous 20% chitosan with mol. weight 500,000 and cation equivalent 4.44 meq/g to give an aqueous polymer dispersion with polymer particle diameter  $\leq 10 \mu\text{m}$ , viscosity 400 mPa-s, and weight average mol. weight 10,000,000.

IC ICM C08L101-14

ICS C08F002-20; C08L001-08; C08L003-02; C08L003-04; C08L005-08

CC 35-4 (Chemistry of Synthetic High Polymers)

ST water soluble polymer dispersions prepn; acryloyloxyethyltrimethylammonium chloride acrylamide copolymer prepn chitosan dispersant

IT Polyelectrolytes

(amphoteric; preparation of water soluble polymer dispersions in presence of dispersing agents)

IT Polyelectrolytes

(cationic, optionally dispersing agents; preparation of water soluble polymer dispersions in presence of dispersing agents)

IT Dispersing agents

(preparation of water soluble polymer dispersions in presence of dispersing agents)

IT Polymers, preparation

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(water-soluble; preparation of water soluble polymer dispersions in presence of dispersing agents)

IT 2382-43-6D, 2-Hydroxypropyltrimethylammonium chloride, starch derivs.

3033-77-0D, Glycidyltrimethylammonium chloride, natural type polymer

derivs. 9004-34-6D, Cellulose, derivs. 9005-25-8D, Starch,

cationically modified 9012-76-4, Chitosan 9012-76-4D, Chitosan,

glycidyltrimethylammonium chloride derivs. 9032-42-2, Methylhydroxy

ethylcellulose

RL: MOA (Modifier or additive use); USES (Uses)

(dispersing agent; preparation of water soluble polymer dispersions in presence of dispersing agents)

IT 35429-19-7P, Acrylamide-methacryloyloxyethyltrimethylammonium chloride

copolymer 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium

chloride copolymer 75150-29-7P, Acrylamide-acryloylaminopropyltrimethyla

mmonium chloride copolymer 101060-97-3P 108388-79-0P 109578-73-6P,

Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride

copolymer 140668-04-8P 160767-52-2P 496809-90-6P

**496810-06-1P**

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**

**(Preparation)**

(preparation of water soluble polymer dispersions in presence of dispersing

agents)

IT 4584-46-7D, 2-Chloroethyldimethylammonium chloride, starch derivs.  
RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of water soluble polymer dispersions in presence of dispersing agents)

IT 496810-06-1P

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
(Preparation)

(preparation of water soluble polymer dispersions in presence of dispersing agents)

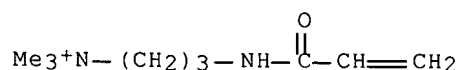
RN 496810-06-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride,  
polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

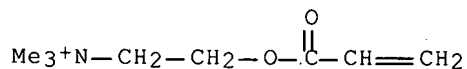
CMF C9 H19 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

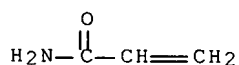
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



DN 138:153959  
 TI Water soluble polymer dispersings and their production method  
 IN Takeda, Hisao; Sugiyama, Toshiaki  
 PA Hymo Corporation, Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003041135	A	20030213	JP 2001-226013	20010726
PRAI	JP 2001-226013		20010726		

AB Title dispersions useful for flocculants comprise water soluble particles selected from cationic, nonionic, and amphoteric polymers with particle diameter  $\leq 100 \mu\text{m}$  in an aqueous salt solution and aqueous salt solution-soluble graft copolymers having a side chain represented by  $(\text{CHR}_1\text{CH}_2\text{O})_n\text{R}_2$  as dispersing agents, wherein  $\text{R}_1 = \text{H}$ , or methyl;  $\text{R}_2 = \text{H}$ ,  $\text{C}_1\text{-3 alkyl}$ ; and  $n = 1\text{-}50$  integer. Thus, acryloyloxyethyltrimethylammonium chloride and polyoxyethylene glycol methacrylate were polymerized to give an aqueous 30% graft copolymer with cationic monomer rate 70 mol%, mol. weight 800,000, and ion equivalent 2.43 meq/g, 67.4 g 50% aqueous acrylamide and 115.0 g 80% aqueous acryloyloxyethyltrimethylammonium chloride were polymerized in the presence of the resulting 20.8 g graft copolymer to give a polymer dispersion with viscosity 150 mPa-s, particle size  $\leq 10 \mu\text{m}$ , and weight average mol. weight 8,000,000.

IC ICM C08L101-14

ICS B01F017-42; C08F002-20; C08F212-14; C08F220-34; C08F220-56;  
 C08F220-58; C08F220-60; C08F226-02; C08F228-02; C08F290-06;  
 C08L101-06

CC 35-4 (Chemistry of Synthetic High Polymers)

ST water soluble polymer dispersings prepn; acryloyloxyethyltrimethylammonium chloride polyoxyethylene glycol methacrylate graft copolymer dispersing agent; acrylamide acryloyloxyethyltrimethylammonium chloride copolymer dispersion prepn

IT Polyoxyalkylenes, preparation

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(acrylic, graft, dispersing agents; preparation of water soluble polymer dispersings in presence of graft copolymer dispersing agents)

IT Dispersing agents

(preparation of water soluble polymer dispersings in presence of graft copolymer dispersing agents)

IT Polymers, preparation

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses)

(water-soluble; preparation of water soluble polymer dispersings in presence of

graft copolymer dispersing agents)

IT 194717-69-6P 321936-93-0P 496811-35-9P 496811-36-0P 496811-37-1P  
 496811-38-2P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(dispersing agent; preparation of water soluble polymer dispersings in presence

of graft copolymer dispersing agents)

IT 35429-19-7P 69418-26-4P, Acrylamide-acryloyloxyethyltrimethylammonium chloride copolymer 75150-29-7P, Acrylamide-acryloylaminopropyltrimethylammonium chloride copolymer 101060-97-3P 108388-79-0P,  
 Acrylamide-acryloyloxyethyldimethylbenzylammonium chloride-

acryloyloxyethyltrimethylammonium chloride copolymer 109578-73-6P,  
 Acrylamide-acrylic acid-acryloyloxyethyltrimethylammonium chloride  
 copolymer 160767-52-2P 179816-63-8P 496809-90-6P  
**496810-06-1P**

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**

(preparation of water soluble polymer dispersings in presence of graft  
 copolymer dispersing agents)

IT **496810-06-1P**

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**

(preparation of water soluble polymer dispersings in presence of graft  
 copolymer dispersing agents)

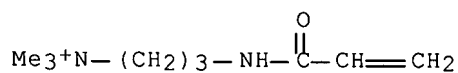
RN 496810-06-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride,  
 polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-  
 propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

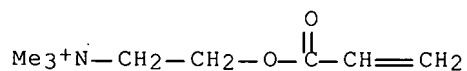


● Cl<sup>-</sup>

CM 2

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

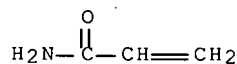


● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2001:150613 HCAPLUS Full-text  
 DN 134:208333  
 TI Polymer composition and a procedure for its production  
 IN Brehm, Helmuth; Hartan, Hans-Georg  
 PA Stockhausen G.m.b.H. & Co. K.-G., Germany  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19941072	A1	20010301	DE 1999-19941072	19990830
	CA 2382851	A1	20010308	CA 2000-2382851	20000802
	WO 2001016185	A1	20010308	WO 2000-EP7480	20000802
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	BR 2000013578	A	20020430	BR 2000-13578	20000802
	TR 200200512	T2	20020621	TR 2002-512	20000802
	EP 1228100	A1	20020807	EP 2000-958360	20000802
	EP 1228100	B1	20050720		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003508556	T	20030304	JP 2001-520744	20000802
	RU 2245349	C2	20050127	RU 2002-106750	20000802
	AT 299894	T	20050815	AT 2000-958360	20000802
	ES 2245646	T3	20060116	ES 2000-958360	20000802
	ZA 2002000890	A	20030131	ZA 2002-890	20020131
	IN 2002MN00141	A	20060113	IN 2002-MN141	20020131
	IN 2005MN00875	A	20050930	IN 2005-MN875	20050805
PRAI	DE 1999-19941072	A	19990830		
	WO 2000-EP7480	W	20000802		
	IN 2002-MN141	A3	20020131		
AB	Water-soluble, preferably powdered polymer compns., useful as flocculants, are obtained by continuous polymerization of $\geq 1$ unsatd. monomer, in which $\geq 1$ of the process parameters is varied in a recurring pattern. Thus, 3074 kg 50% acrylamide solution was continuously polymerized with 660 kg N-[3-(dimethylamino)propyl]acrylamide methochloride (I) by irradiation at 365 nm, during which the addition rate of I was raised from 11.5 to 95 kg/h and reduced back to 11.5 kg/h in 1-h cycles.				
IC	ICM C08F002-04				
	ICS C08F002-10; C08F002-00				
CC	35-4 (Chemistry of Synthetic High Polymers)				
	Section cross-reference(s): 60				
ST	monomer ratio variation photopolymn; flocculant manuf continuous polymn				
IT	Flocculants				
	(flocculant manufacture by varying the monomer ratio during continuous photopolymn.)				
IT	Wastewater treatment				
	(flocculation; with flocculants manufactured by varying the monomer ratio during continuous photopolymn.)				

IT Polymerization  
 (photopolymn.; flocculant manufacture by varying the monomer ratio during continuous photopolymn.)

IT 75150-29-7P, Acrylamide-N-[3-(dimethylamino)propyl]acrylamide methylchloride copolymer **328384-71-0P**  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (flocculant manufacture by varying the monomer ratio during continuous photopolymn.)

IT **328384-71-0P**  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (flocculant manufacture by varying the monomer ratio during continuous photopolymn.)

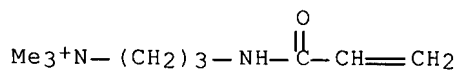
RN 328384-71-0 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

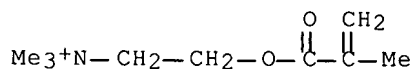
CMF C9 H19 N2 O . Cl



● Cl<sup>-</sup>

CM 2

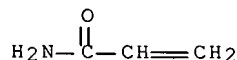
CRN 5039-78-1  
 CMF C9 H18 N O2 . Cl



● Cl<sup>-</sup>

CM 3

CRN 79-06-1  
 CMF C3 H5 N O





RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:758481 HCAPLUS Full-text

DN 130:42800

TI Dewatering of sludges containing metal hydroxides using amphoteric polymer flocculants

IN Ikeda, Kazuo

PA Hymo Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10309405	A	19981124	JP 1997-132957	19970508
	JP 3327813	B2	20020924		
PRAI	JP 1997-132957		19970508		

AB Sludges containing metal hydroxides, obtained by treatment of wastewater with inorg. coagulants followed by solid-liquid separation, are mixed with amphoteric polymer coagulants and then dewatered. The amphoteric coagulants are prepared by strong agitation of (A) 5-97.9999 mol% water-soluble cationic vinyl monomers of formula:  $[H_2C(:C)R_1]COABN^+(R_2)(R_3)(R_4) \cdot X^-$ , in which A = O, or NH; B = C<sub>2</sub>H<sub>4</sub>, C<sub>3</sub>H<sub>6</sub>, C<sub>3</sub>H<sub>5</sub>OH; R<sub>1</sub> = H, Me; R<sub>2</sub>-3 = C<sub>1</sub>-4 alkyl; R<sub>4</sub> = H, C<sub>1</sub>-4 alkyl, benzyl; X<sup>-</sup> = anionic ion pair, (B) 0.0001-0.01 mol% bifunctional monomers, (C) 2-30 mol% water-soluble anionic vinyl monomers, (D) balance nonionic water-soluble monomers, (E) chain-transfer agents, (F) water, (G)  $\geq 1$  oily hydrocarbons, and (H)  $\geq 1$  surfactants of sufficient amount and HLB for formation of water-in-oil emulsion, followed by emulsion polymerization and mixing with hydrophilic surfactant. The amphoteric polymer flocculants are useful for dewatering of sludges from slaughterhouse sewage treatment.

IC ICM B01D021-01

ICS C02F011-14; C08F002-32; C08F020-34; C08F020-60

CC 60-4 (Waste Treatment and Disposal)

Section cross-reference(s): 17, 35, 38

ST amphoteric polymer flocculant sludge dewatering; emulsion polymn polymer flocculant sludge dewatering; slaughterhouse wastewater treatment sludge dewatering; wastewater coagulation sludge dewatering

IT Polyelectrolytes

(amphoteric; manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing

metal

hydroxides)

IT Wastewater treatment

(coagulation; dewatering of sludges containing metal hydroxides obtained by coagulation of wastewater)

IT Wastewater treatment sludge

(dewatering; manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing

metal

hydroxides)

IT Isoalkanes

RL: NUU (Other use, unclassified); USES (Uses)

(in manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal

hydroxides)

IT Polymerization

KATHLEEN FULLER EIC1700 571/272-2505

(inverse emulsion; in manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

IT Flocculants

(manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

IT Slaughterhouse

(wastewater sludges from; manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

IT 67-63-0, Isopropyl alcohol, uses

RL: MOA (Modifier or additive use); USES (Uses)

(chain-transfer agent in; manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

IT 1327-41-9, Poly(aluminum chloride) 7439-89-6, Iron, processes

7446-70-0, Aluminum chloride, processes 7705-08-0, Ferric chloride,

processes 7720-78-7, Ferrous sulfate 10043-01-3, Aluminum sulfate

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(coagulant; dewatering of sludges containing metal hydroxides obtained by coagulation of wastewater)

IT 9016-45-9, Polyoxyethylene nonyl phenyl ether

RL: NUU (Other use, unclassified); USES (Uses)

(hydrophilic surfactant for hydrophilization of flocculants in; manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

IT 205177-27-1P 208851-29-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

IT 1338-43-8, Sorbitan monooleate

RL: NUU (Other use, unclassified); USES (Uses)

(surfactant for polymerization in; manufacture of amphoteric acrylic polymer

flocculants by water-in-oil emulsion polymerization for dewatering of sludges

containing metal hydroxides)

IT 208851-29-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of amphoteric acrylic polymer flocculants by water-in-oil emulsion polymerization for dewatering of sludges containing metal hydroxides)

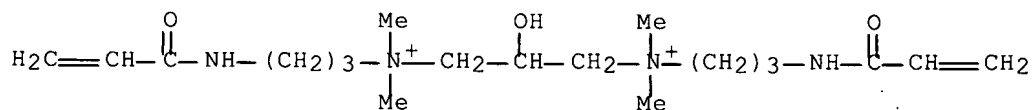
RN 208851-29-0 HCAPLUS

CN 1,3-Propanediaminium, 2-hydroxy-N,N,N',N'-tetramethyl-N,N'-bis[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 208851-28-9

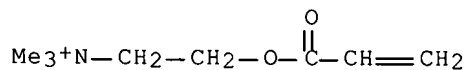
CMF C19 H38 N4 O3 . 2 Cl

● 2 Cl<sup>-</sup>

CM 2

CRN 44992-01-0

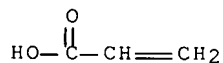
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-10-7

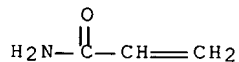
CMF C3 H4 O2



CM 4

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:675246 HCAPLUS Full-text

DN 129:320559

TI Flocculating agents and process for dewatering of sludges with high salt concentrations

IN Miyashima, Toru

PA Hymo Corp., Japan

KATHLEEN FULLER EIC1700 571/272-2505

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10277600	A	19981020	JP 1997-99599	19970403
	JP 3681143	B2	20050810		
PRAI	JP 1997-99599		19970403		

AB The title agents are mixts. of hydrophilic surfactants with polymers obtained by reverse-phase emulsion polymerization of acryloyloxyethyl dimethylbenzyl ammonium chloride with monomers containing difunctional monomers in the presence of chain transfer agents and, when the agents are diluted with water to concns. added to sludges, the diluted liqs. contain particles with diams.  $\leq 30 \mu\text{m}$  observed by microscopy and form continuous dry films after applying onto a glass plate and drying at  $105^\circ$ . Sludges having elec. conductivity  $\geq 1000 \text{ mS/m}$  are dewatered after flocculating with the agents. The agents having high flocculating activity are useful for dewatering of organic sludges from biol. wastewater treatment involving dilution with seawater.

IC ICM C02F011-14

ICS B01D021-01

CC 60-4 (Waste Treatment and Disposal)

Section cross-reference(s): 38

ST crosslinked polymer flocculant salt sludge dewatering; emulsion polymn polymer flocculant sludge dewatering; chain transfer agent polymer sludge dewatering; wastewater treatment sludge dewatering polymer flocculant

IT Chain transfer agents

Flocculants

Polyelectrolytes

(crosslinked polymer flocculants prepared by emulsion polymerization using chain-transfer agents for dewatering of sludges with high salt concns.)

IT Wastewater treatment sludge

(dewatering; crosslinked polymer flocculants prepared by emulsion polymerization

using chain-transfer agents for dewatering of sludges with high salt concns.)

IT Polymerization

(emulsion, reverse-phase; crosslinked polymer flocculants prepared by emulsion polymerization using chain-transfer agents for dewatering of

sludges

with high salt concns.)

IT Surfactants

(nonionic; crosslinked polymer flocculants prepared by emulsion

polymerization

using chain-transfer agents for dewatering of sludges with high salt concns.)

IT 67-63-0, Isopropyl alcohol, uses

RL: MOA (Modifier or additive use); USES (Uses)

(chain-transfer agent; crosslinked polymer flocculants prepared by

emulsion polymerization using chain-transfer agents for dewatering of sludges

with high salt concns.)

IT 208851-29-0P 212330-38-6P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PRP

(Properties); PREP (Preparation); USES (Uses)

(crosslinked polymer flocculants prepared by emulsion polymerization using chain-transfer agents for dewatering of sludges with high salt concns.)

IT 7647-14-5, Salt, miscellaneous

KATHLEEN FULLER EIC1700 571/272-2505

RL: MSC (Miscellaneous)

(crosslinked polymer flocculants prepared by emulsion polymerization using chain-transfer agents for dewatering of sludges with high salt concns.)

IT 1338-43-8, Sorbitan monooleate

RL: MOA (Modifier or additive use); USES (Uses)

(surfactant; crosslinked polymer flocculants prepared by emulsion polymerization

using chain-transfer agents for dewatering of sludges with high salt concns.)

IT 208851-29-0P 212330-38-6P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PRP (Properties); **PREP (Preparation)**; USES (Uses)

(crosslinked polymer flocculants prepared by emulsion polymerization using chain-transfer agents for dewatering of sludges with high salt concns.)

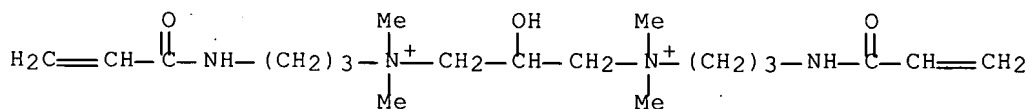
RN 208851-29-0 HCAPLUS

CN 1,3-Propanediaminium, 2-hydroxy-N,N,N',N'-tetramethyl-N,N'-bis[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 208851-28-9

CMF C19 H38 N4 O3 . 2 Cl

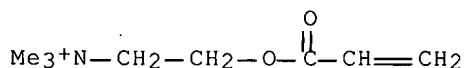


● 2 Cl<sup>-</sup>

CM 2

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

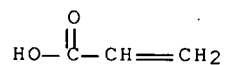


● Cl<sup>-</sup>

CM 3

CRN 79-10-7

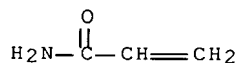
CMF C3 H4 O2



CM 4

CRN 79-06-1

CMF .C3 H5 N O



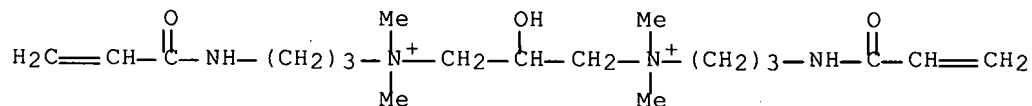
RN 212330-38-6 HCAPLUS

CN 1,3-Propanediaminium, 2-hydroxy-N,N,N',N'-tetramethyl-N,N'-bis[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 208851-28-9

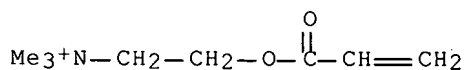
CMF C19 H38 N4 O3 . 2 Cl

● 2 Cl<sup>-</sup>

CM 2

CRN 44992-01-0

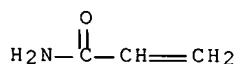
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:599831 HCAPLUS Full-text  
 DN 129:280517  
 TI Sludge dewatering with amphoteric polymer flocculants  
 IN Miyashima, Toru  
 PA Hymo Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 10244300	A	19980914	JP 1997-63915	19970304
	JP 3547110	B2	20040728		
PRAI	JP 1997-63915		19970304		

AB The title method involves stirring organic sludges with inorg. coagulants, granulating them with amphoteric polymer flocculants, filtering and separating the filtrates to concentrate the granulation products, and dewatering the granulation products with a dehydrator. The flocculants are obtained by vigorously stirring the following components A-H to form monomer phase fine droplets in oily phases, polymerizing the monomers, and mixing them with hydrophilic surfactants: (A) 5-97.9999 mol% (based on total monomers) water-soluble cationic vinyl monomers  $\text{CH}_2(\text{:C})\text{R}_1\text{COABN}+\text{R}_2\text{R}_3\text{R}_4 \text{X}^-$  (A = O, NH; B =  $\text{C}_2\text{H}_4$ ,  $\text{C}_3\text{H}_6$ ,  $\text{C}_3\text{H}_5\text{OH}$ ;  $\text{R}_1$  = H, Me;  $\text{R}_2$ ,  $\text{R}_3$  = C1-4 alkyl;  $\text{R}_4$  = H, C1-4 alkyl,  $\text{PhCH}_2$ ;  $\text{X}^-$  = counter anion) or their mixts., (B) 0.0001-0.01 mol% bifunctional monomers, (C) 2-30 mol% water-soluble anionic vinyl monomers or their mixts., (D) balance nonionic water-soluble monomers, (E) chain-transfer agents, (F)  $\text{H}_2\text{O}$ , (G) oils containing  $\geq 1$  hydrocarbon, and (H)  $\geq 1$  surfactant having amts. and HLB sufficient for forming reverse emulsions (i.e. water-in-oil emulsions). The process gives dewatered cakes which are easily removed from the filter cloth and is especially useful for dewatering of excess sludges with low suspended solids concns.

IC ICM C02F011-14  
 ICS B01D021-01

CC 60-4 (Waste Treatment and Disposal)  
 Section cross-reference(s): 38

ST sludge dewatering amphoteric polymer flocculant emulsion; wastewater treatment sludge dewatering amphoteric polyelectrolyte

IT Polyelectrolytes  
 (amphoteric; sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT Wastewater treatment sludge  
 (dewatering; sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT Polymerization  
 (emulsion; sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT Surfactants  
 (nonionic; sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT Quaternary ammonium compounds, uses

KATHLEEN FULLER EIC1700 571/272-2505

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)

(polymers; sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT Flocculants

Sludges

(sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT 109578-73-6P 208851-29-0P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); **PREP (Preparation)**; USES (Uses)

(sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT 1338-43-8, Sorbitan monooleate 9016-45-9, Polyoxyethylene nonylphenyl ether

RL: MOA (Modifier or additive use); USES (Uses)

(surfactant; sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

IT 208851-29-0P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); **PREP (Preparation)**; USES (Uses)

(sludge dewatering with crosslinked amphoteric polymer flocculants prepared by reverse-phase emulsion polymerization)

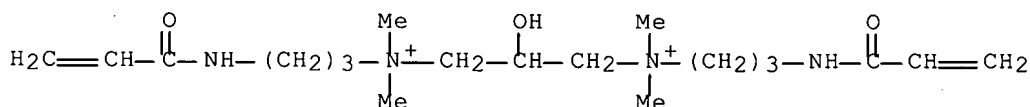
RN 208851-29-0 HCAPLUS

CN 1,3-Propanediaminium, 2-hydroxy-N,N,N',N'-tetramethyl-N,N'-bis[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 208851-28-9

CMF C19 H38 N4 O3 . 2 Cl

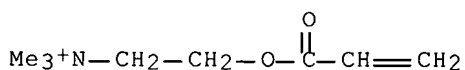


● 2 Cl<sup>-</sup>

CM 2

CRN 44992-01-0

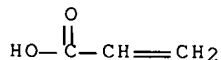
CMF C8 H16 N O2 . Cl



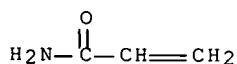
● Cl<sup>-</sup>



CM 3

CRN 79-10-7  
CMF C3 H4 O2

CM 4

CRN 79-06-1  
CMF C3 H5 N O

L40 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:535722 HCAPLUS Full-text

DN 129:217402

TI Unsaturated quaternary ammonium compounds as crosslinking agents for  
(meth)acrylic polymers and their uses in polymer coagulants

IN Aoyama, Kiyoshi

PA Hymo Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10218797	A	19980818	JP 1997-42838	19970213
PRAI	JP 1997-42838		19970213		

OS MARPAT 129:217402

AB Crosslinking agents are CH<sub>2</sub>:CR<sub>1</sub>COABN+R<sub>2</sub>R<sub>3</sub>ZN+R<sub>5</sub>R<sub>6</sub>B'A'COCR<sub>4</sub>:CH<sub>2</sub>.2X- (I; A, A' = O, NH; B, B' = C<sub>2</sub>H<sub>4</sub>, C<sub>3</sub>H<sub>6</sub>, C<sub>3</sub>H<sub>5</sub>OH; R<sub>1</sub>, R<sub>4</sub> = H, Me; R<sub>2</sub>, R<sub>3</sub>, R<sub>5</sub>, R<sub>6</sub> = C<sub>1</sub>-4 alkyls; Z = C<sub>2</sub>H<sub>4</sub>, C<sub>3</sub>H<sub>5</sub>OH; X- = anions). Water-absorbing resins or water-soluble polymers containing I and water-soluble (meth)acrylic monomers are useful as coagulants, dewatering agents for sludges, retention and drainage agents for paper manufacture, and paper strengthening agents. Thus, acryloyloxyethyltrimethylammonium chloride 24.9997, acrylic acid 5, 2-hydroxypropylidene-1,3-bis(N-acryloylaminopropyl)-N,N-dimethylammonium chloride 3 + 10-4, and acrylamide 70 mol.% were polymerized to give a coagulant, which was added to a sewage sludge at 1.2% and pressed to give a cake showing water content 66.8%.

IC ICM C07B037-02

ICS B01D021-01; C02F011-14; C08F226-04; D21H019-20; D21H017-37;  
C08F220-06

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 43, 60

ST quaternary ammonium crosslinking agent polymer coagulant; acrylic polymer

KATHLEEN FULLER EIC1700 571/272-2505

coagulant crosslinking agent; sludge dewatering coagulant crosslinking agent; paper strengthening agent polymer crosslinking agent; retention agent paper crosslinking agent; drainage agent paper crosslinking agent

IT Wastewater treatment sludge  
(dewatering; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT Vinyl compounds, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymers; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT Paper  
(strengthening agents; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT Coagulants  
Crosslinking agents  
(unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT Quaternary ammonium compounds, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT Absorbents  
(water; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT 7732-18-5, Water, properties  
RL: PRP (Properties)  
(absorbents; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT 208851-29-0P 212330-38-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(coagulants; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT 212330-39-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(paper strengthening agents; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT 212330-40-0P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water absorbers; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

IT 208851-29-0P 212330-38-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(coagulants; unsatd. quaternary ammonium compds. as crosslinking agents for (meth)acrylic polymers)

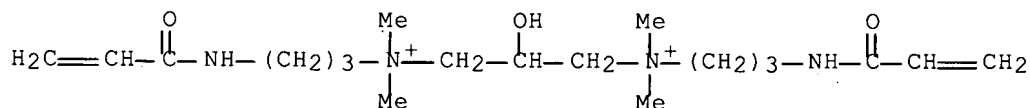
RN 208851-29-0 HCAPLUS

CN 1,3-Propanediaminium, 2-hydroxy-N,N,N',N'-tetramethyl-N,N'-bis[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with 2-propenamide, 2-propenoic acid and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 208851-28-9

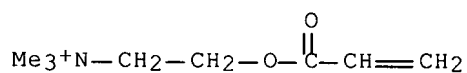
CMF C19 H38 N4 O3 . 2 Cl

● 2 Cl<sup>-</sup>

CM 2

CRN 44992-01-0

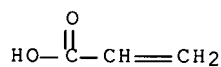
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-10-7

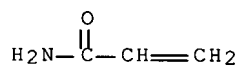
CMF C3 H4 O2



CM 4

CRN 79-06-1

CMF C3 H5 N O



RN 212330-38-6 HCAPLUS

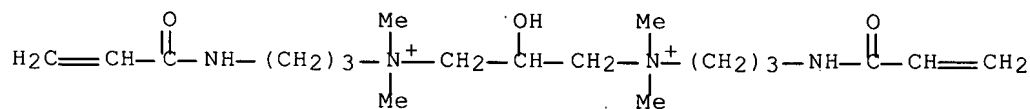
CN 1,3-Propanediaminium, 2-hydroxy-N,N,N',N'-tetramethyl-N,N'-bis[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with 2-propenamide and N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 208851-28-9

KATHLEEN FULLER EIC1700 571/272-2505

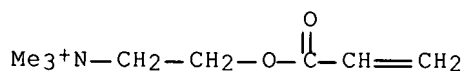
CMF C19 H38 N4 O3 . 2 Cl

● 2 Cl<sup>-</sup>

CM 2

CRN 44992-01-0

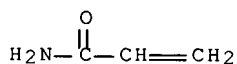
CMF C8 H16 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:51828 HCAPLUS Full-text

DN 126:131902

TI Preparation of dispersion of water-soluble cationic polymer and its use as flocculant and paper chemical

IN Takeda, Hisao

PA Hymo Corporation, Japan

SO U.S., 8 pp., Cont.-in-part of U.S. Ser. No. 263,536, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	----	-----	-----
PI	US 5587415	A	19961224	US 1995-502613	19950714
	JP 05032722	A	19930209	JP 1991-211309	19910730
PRAI	JP 1991-211309	A	19910730		
	US 1992-921566	B2	19920729		

KATHLEEN FULLER EIC1700 571/272-2505

US 1993-153750 B1 19931117

US 1994-263536 B2 19940622

AB A H<sub>2</sub>O-soluble cationic (co)polymer dispersion is prepared by the polymerization of a specified cationic quaternary monomer, which is obtained by quaternization using an C<sub>4</sub>-10-alkyl halide, optionally with 0-95% another cationic monomer and/or (meth)acrylamide, carried out in a salt solution which does not dissolve the resulting (co)polymer, and in the presence of a specific cationic polymer dispersant which is soluble in the salt solution. Thus, the copolymer of acrylamide and acryloyloxyethyltrimethylbutylammonium chloride at 50° for 10 h in the presence of poly(acryloyloxyethyltrimethylammonium chloride) dispersant, ammonium sulfate, and water gave a stable polymer dispersion of viscosity (25°) 2500 cP and particle size 25 µm. Wastewater treated with 15 mg the above polymer dispersion demonstrated a floatation speed 20.8 cm/min, vs. 8.8 cm/min for a com. powder flocculant.

IC ICM C08F002-16

INCL 524458000

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 43, 61

ST dimethylaminoethyl acrylate quaternary alkyl halide salt; dispersion polymer dimethylaminoethyl acrylate salt; cationic polymer dispersion flocculant wastewater; paper chem cationic polymer dispersion; dispersant dimethylaminoethyl acrylate polymer

IT Paper

(chemical, fixing agent and drainage aid; preparation of dispersion of water-soluble cationic polymer and its use as flocculant and paper

chemical)

IT Polymerization

(dispersion; preparation of dispersion of water-soluble cationic polymer

and

its use as flocculant and paper chemical)

IT Wastewater treatment

(flocculation, agents; preparation of dispersion of water-soluble cationic polymer and its use as flocculant and paper chemical)

IT Dispersing agents

(in preparation of dispersion of water-soluble cationic polymer and its use

as

flocculant and paper chemical)

IT 5039-78-1 54076-97-0 69418-26-4

RL: NUU (Other use, unclassified); USES (Uses)

(dispersant for cationic polymer manufacture; preparation of dispersion of water-soluble cationic polymer and its use as flocculant and paper

chemical)

IT 148912-51-0P 148912-54-3P 186344-36-5P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of dispersion of water-soluble cationic polymer and its use as flocculant and paper chemical)

IT 148912-54-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of dispersion of water-soluble cationic polymer and its use as flocculant and paper chemical)

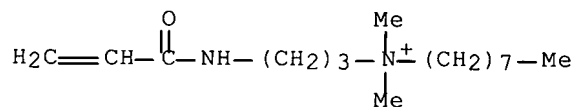
RN 148912-54-3 HCAPLUS

CN 1-Octanaminium, N,N-dimethyl-N-[3-[(1-oxo-2-propenyl)amino]propyl]-, iodide, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 148912-53-2

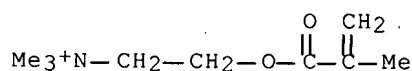
CMF C16 H33 N2 O . I

● I<sup>-</sup>

CM 2

CRN 5039-78-1

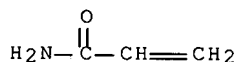
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:673685 HCAPLUS Full-text

DN 125:303654

TI Enhancement of aluminum sulfate effect in paper making by adding acrylamide polymers containing water-soluble aluminum compounds

IN Kimura, Yoshiharu; Konishi, Nobuo

PA Harima Chemicals Inc, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

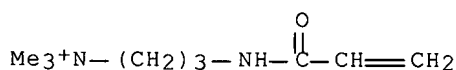
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 08226092	A	19960903	JP 1995-53572	19950217
	JP 3453624	B2	20031006		
PRAI	JP 1995-53572		19950217		

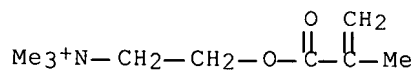
- AB Diluted solns. of amphoteric, cationic, and/or anionic acrylamide polymers are mixed with water-soluble Al compds. then the mixts. are added to pulp slurries in paper making process, in which, ionic effect of Al sulfate (alum) is maintained even under condition inappropriate for it, e.g., paper making in neutral condition. Thus, a pulp slurry was mixed with 2% alum and with 2% diluted solution of 94:6 acrylamide-acrylic acid copolymer containing 1% alum and made into a paper showing sp. bursting strength 2.17.
- IC ICM D21H017-37
- CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
- ST acrylamide polymer aluminum compd paper; alum effect enhancement pulp slurry; acrylic acid acrylamide copolymer paper; aluminum sulfate acrylamide copolymer blend; bursting strength neutral paper alum
- IT Paper  
Pulp, cellulose  
(paper made from pulp slurry having acrylamide polymers containing water-soluble aluminum compds.)
- IT Quaternary ammonium compounds, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymers, paper made from pulp slurry having acrylamide polymers containing water-soluble aluminum compds.)
- IT 9003-06-9P, Acrylamide-acrylic acid copolymer 32840-16-7P,  
Acrylamide-acrylic acid-dimethylaminoethyl acrylate copolymer  
107087-24-1P 116191-76-5P 149093-93-6P 182065-50-5P 182997-36-0P  
182997-44-0P 182997-50-8P 182997-72-4P 182997-78-0P  
182997-85-9P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(paper made from pulp slurry having acrylamide polymers containing water-soluble aluminum compds.)
- IT 1327-41-9, Locron 1344-28-1, Alumina Sol 100, uses 10043-01-3,  
Aluminum sulfate 136939-01-0, PASS  
RL: MOA (Modifier or additive use); USES (Uses)  
(paper made from pulp slurry having acrylamide polymers containing water-soluble aluminum compds.)
- IT 182997-78-0P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(paper made from pulp slurry having acrylamide polymers containing water-soluble aluminum compds.)
- RN 182997-78-0 HCAPLUS
- CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with methylenebutanedioic acid, 2-methyl-2-propenamide, 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)
- CM 1
- CRN 45021-77-0
- CMF C9 H19 N2 O . Cl



CM 2

CRN 5039-78-1

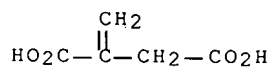
CMF C9 H18 N O2 . Cl



CM 3

CRN 97-65-4

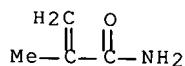
CMF C5 H6 O4



CM 4

CRN 79-39-0

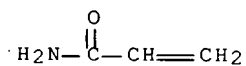
CMF C4 H7 N O



CM 5

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:986956 HCAPLUS Full-text

DN 124:131577

TI Ink-jet recording material with good gloss and transparency

IN Sekine, Mikya; Furukawa, Akira

KATHLEEN FULLER EIC1700 571/272-2505

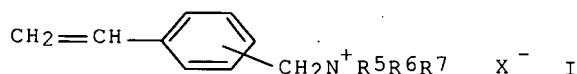


PEZZUTO 10/518595

4/24/07

PA Mitsubishi Paper Mills Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07266686	A	19951017	JP 1994-57636	19940328
PRAI	JP 1994-57636		19940328		
GI					



- AB The material has a support having an ink-absorbing layer containing a water-soluble quaternary ammonium salt-containing polymer coated with a layer containing SiO<sub>2</sub> fine particles and 10-150 weight% p-vinylphenol copolymer. The water-soluble quaternary ammonium salt-containing polymer may be obtained by polymerization of CH<sub>2</sub>:C(R<sub>1</sub>)C(:O)Q(CH<sub>2</sub>)<sub>n</sub>+R<sub>2</sub>R<sub>3</sub>R<sub>4</sub>.X<sup>-</sup>, I, and/or CH<sub>2</sub>:CHCH<sub>2</sub>N+R<sub>8</sub>R<sub>9</sub>R<sub>10</sub>.X<sup>-</sup> (R<sub>1</sub> = H, Me; Q = O, NH; R<sub>2</sub>-7 = Me, Et; X<sup>-</sup> = halogen ion, SO<sub>3</sub><sup>-</sup>, alkylsulfonic acid anion, AcO<sup>-</sup>, alkylcarboxylic acid anion; n = 2, 3; R<sub>8</sub>-10 = Me, Et, allyl). The material shows good transparency and water resistance.
- IC ICM B41M005-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38
- ST ink jet recording vinylphenol polymer overcoat; gloss ink jet recording material; transparency ink jet recording material; water resistance ink jet recording
- IT Ionomers  
 RL: DEV (Device component use); USES (Uses)  
 (ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)
- IT Printing, nonimpact  
 (ink-jet, ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)
- IT 74696-50-7  
 RL: DEV (Device component use); USES (Uses)  
 (curing agent; ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)
- IT 24979-70-2, Maruka Lyncur M 24979-71-3, Maruka Lyncur CMM 24979-75-7, Styrene-p-vinylphenol copolymer 110123-09-6, Maruka Lyncur CHM  
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
 (ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)
- IT 26590-05-6P, Acrylamide-diallyldimethylammonium chloride copolymer  
 73363-10-7P, Acrylamide-p-vinylbenzyltrimethylammonium chloride copolymer  
 75150-29-7P, Acrylamide-trimethyl-3-(acryloylamino)propylammonium chloride copolymer 172785-52-3P, Acrylamide-(N,N-dimethylaminopropyl)acrylamide-2-hydroxyethyl methacrylate-trimethyl-3-(acryloylamino)propylammonium

KATHLEEN FULLER EIC1700 571/272-2505

chloride copolymer 172785-53-4P, Acrylamide-N,N-dimethylaminopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-trimethyl-2-(methacryloyloxy)ethylammonium chloride copolymer 172785-54-5P, N,N-Dimethylaminoethyl methacrylate-2-hydroxyethyl methacrylate-isopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride copolymer 172785-55-6P, N,N-Dimethylaminoethyl methacrylate-isopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-trimethyl-2-(methacryloyloxy)ethylammonium chloride copolymer 172785-56-7P, N,N-Dimethylaminoethyl methacrylate-2-hydroxyethyl methacrylate-isopropylacrylamide-p-vinylbenzyltrimethylammonium chloride copolymer 172785-57-8P, N,N-Dimethylaminoethyl methacrylate-diallyldimethylammonium chloride-2-hydroxyethyl methacrylate-isopropylacrylamide copolymer 172785-58-9P, N,N-Dimethylaminoethyl methacrylate-2-hydroxyethyl methacrylate-isopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-p-vinylbenzyltrimethylammonium chloride copolymer

RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)

(ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)

IT 7631-86-9, Silica, uses

RL: DEV (Device component use); USES (Uses)

(overcoat layer; ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)

IT 172785-53-4P, Acrylamide-N,N-dimethylaminopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-trimethyl-2-(methacryloyloxy)ethylammonium chloride copolymer

RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)

(ink-jet recording material having vinylphenol copolymer overcoat layer with good gloss and transparency)

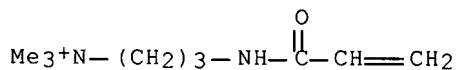
RN 172785-53-4 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with N-[3-(dimethylamino)propyl]-2-propenamide, 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

CMF C9 H19 N2 O . Cl

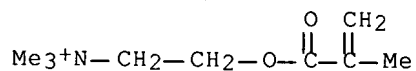


● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

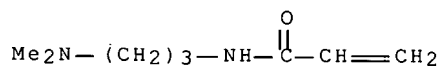
CMF C9 H18 N O2 . Cl



CM 3

CRN 3845-76-9

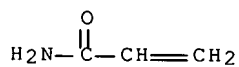
CMF C8 H16 N2 O



CM 4

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:982873 HCAPLUS Full-text

DN 124:160424

TI Ink-jet recording material with improved transparency and gloss

IN Ikeda, Mitsuhiro; Furukawa, Akira; Kato, Makoto

PA Mitsubishi Paper Mills Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

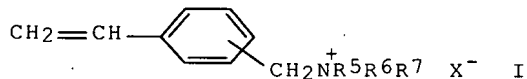
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 07257016	A	19951009	JP 1994-48355	19940318
PRAI	JP 1994-48355		19940318		
GI					



- AB The material consists of a support coated with an ink-absorbing layer containing a water-soluble quaternary ammonium salt-containing polymer and a layer containing organic polymer fine particles (ink-absorbing layer coverage ratio 1-50 weight% ) and 1-100 weight% of an alc.- or water-soluble polymer (<0.3 g/m<sup>2</sup>). The quaternary ammonium salt-containing polymer may be obtained by polymerization of CH<sub>2</sub>:C(R<sub>1</sub>)[C(:O)Q(CH<sub>2</sub>)<sub>n</sub>N+R<sub>2</sub>R<sub>3</sub>R<sub>4</sub>.X<sup>-</sup>, a styrene derivative I, and CH<sub>2</sub>:CHCH<sub>2</sub>N+R<sub>8</sub>R<sub>9</sub>R<sub>10</sub>.X<sup>-</sup> (R<sub>1</sub> = H, Me; Q = O, NH; R<sub>2</sub>-7 = Me, Et; X<sup>-</sup> = halo, SO<sub>3</sub><sup>-</sup>, alkylsulfonic acid anion, AcO<sup>-</sup>, alkylcarboxylic acid anion; n = 2, 3; R<sub>8</sub>-10 = Me, Et, allyl). The material showed good transparency and water resistance.
- IC ICM B41M005-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST ink jet recording quaternary ammonium polymer; transparency ink jet recording material; gloss ink jet recording material
- IT Epoxy resins, uses  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(curing agents; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT Crosslinking agents  
(epoxy resins; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT Ionomers  
RL: DEV (Device component use); USES (Uses)  
(ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT Printing, nonimpact  
(ink-jet, ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 74696-50-7  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(curing agents; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 26590-05-6P, Acrylamide-diallyldimethylammonium chloride copolymer  
73363-10-7P 75150-29-7P 172785-52-3P **172785-53-4P**  
173255-41-9P 173255-42-0P 173255-43-1P 173255-44-2P  
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)  
(ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 9002-88-4, Flo-Beads LE 1080 9002-89-5, Poly(vinyl alcohol) 9003-01-4, Poly(acrylic acid) 9003-08-1 9003-08-1, Epostar S 12 9003-39-8, Polyvinylpyrrolidone 9004-62-0, Hydroxyethylcellulose 9004-64-2, Hydroxypropylcellulose 9010-77-9, Flo-Beads EA 209 9011-14-7 9012-76-4, Chitosan 25035-72-7, Epostar M 30 28500-83-6, Acrylamide-N-isopropylacrylamide copolymer 156229-01-5, Glossdell M 110 173359-05-2, SBX 3 173359-15-4, Glossdell 1318SX  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(overcoat layer; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)

IT 172785-53-4P

RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP**  
(Preparation); USES (Uses)(ink-jet recording materials having quaternary ammonium salt-containing  
polymer ink-absorbing layer with good gloss and transparency)

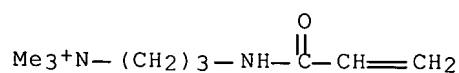
RN 172785-53-4 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride,  
polymer with N-[3-(dimethylamino)propyl]-2-propenamide, 2-propenamide and  
N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride  
(9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

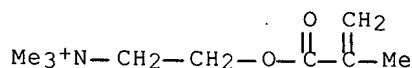
CMF C9 H19 N2 O . Cl



CM 2

CRN 5039-78-1

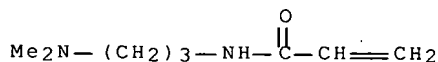
CMF C9 H18 N O2 . Cl



CM 3

CRN 3845-76-9

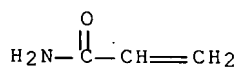
CMF C8 H16 N2 O



CM 4

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:982872 HCAPLUS Full-text  
 DN 124:160423  
 TI Ink-jet recording material with improved transparency and gloss  
 IN Ikeda, Mitsuhiro; Furukawa, Akira; Kato, Makoto  
 PA Mitsubishi Paper Mills Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	----	-----	-----
PI	JP 07257015	A	19951009	JP 1994-48354	19940318
PRAI	JP 1994-48354		19940318		
GI					



AB The material consists of a support coated with an ink-absorbing layer containing a water-soluble quaternary ammonium salt-containing polymer and a layer containing spherical SiO<sub>2</sub> fine particles (ink-absorbing layer coverage ratio 1-50 weight% ) and 5-150 weight% of an alc.-soluble polymer (<0.3 g/m<sup>2</sup>). The quaternary ammonium salt-containing polymer may be obtained by polymerization of CH<sub>2</sub>:C(R<sub>1</sub>)[C(:O)Q(CH<sub>2</sub>)<sub>n</sub>N<sup>+</sup>R<sub>2</sub>R<sub>3</sub>R<sub>4</sub>.X<sup>-</sup>], a styrene derivative I, and CH<sub>2</sub>:CHCH<sub>2</sub>N<sup>+</sup>R<sub>8</sub>R<sub>9</sub>R<sub>10</sub>.X<sup>-</sup> (R<sub>1</sub> = H, Me; Q = O, NH; R<sub>2</sub>-7 = Me, Et; X<sup>-</sup> = halo, SO<sub>3</sub><sup>-</sup>, alkylsulfonic acid anion, AcO<sup>-</sup>, alkylcarboxylic acid anion; n = 2, 3; R<sub>8</sub>-10 = Me, Et, allyl). The material showed good transparency and water resistance.

IC ICM B41M005-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

ST ink jet recording quaternary ammonium polymer; transparency ink jet recording material; gloss ink jet recording material; silica coating ink jet recording

IT Epoxy resins, uses  
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
 (curing agents; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)

IT Ionomers  
 RL: DEV (Device component use); USES (Uses)  
 (ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)

- IT Silsesquioxanes  
RL: DEV (Device component use); MOA (Modifier or additive use); USES  
(Uses)  
(Me, overcoat layer, Tospearl; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT Vinyl acetal polymers  
RL: DEV (Device component use); MOA (Modifier or additive use); USES  
(Uses)  
(butyrals, overcoat layer, S-Lec; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT Printing, nonimpact  
(ink-jet, ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 74696-50-7  
RL: DEV (Device component use); MOA (Modifier or additive use); USES  
(Uses)  
(curing agents; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 26590-05-6P, Acrylamide-diallyldimethylammonium chloride copolymer  
73363-10-7P, Acrylamide-p-vinylbenzyltrimethylammonium chloride copolymer  
75150-29-7P, Acrylamide-trimethyl-3-(acryloylamino)propylammonium chloride copolymer **172785-53-4P**, Acrylamide-3-(N,N-dimethylaminopropyl)acrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-trimethyl-2-(methacryloyloxy)ethylammonium chloride copolymer  
172785-54-5P, N,N-Dimethylaminoethyl methacrylate-2-hydroxyethyl methacrylate-isopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride copolymer 172785-55-6P 172785-56-7P, N,N-Dimethylaminoethyl methacrylate-2-hydroxyethyl methacrylate-isopropylacrylamide-p-vinylbenzyltrimethylammonium chloride copolymer 172785-57-8P  
172785-58-9P, N,N-Dimethylaminoethyl methacrylate-2-hydroxyethyl methacrylate-isopropylacrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-p-vinylbenzyltrimethylammonium chloride copolymer 173274-41-4P, Acrylamide-3-(N,N-dimethylaminopropyl)acrylamide-2-hydroxyethyl methacrylate-trimethyl-3-(acryloylamino)propylammonium chloride copolymer  
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP**  
(Preparation); USES (Uses)  
(ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 25067-34-9, Ethylene-vinyl alcohol copolymer  
RL: DEV (Device component use); MOA (Modifier or additive use); USES  
(Uses)  
(overcoat layer, Soarnol 30T; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT 9003-01-4, Poly(acrylic acid) 9003-39-8, Polyvinylpyrrolidone  
9004-62-0, Hydroxyethylcellulose 9012-76-4, Chitosan 25249-16-5, Poly(2-hydroxyethyl methacrylate) 25609-89-6, Crotonic acid-vinyl acetate copolymer 28500-83-6, Acrylamide-N-isopropylacrylamide copolymer  
85510-39-0, Toresin EF 30T 153315-80-1, Tospearl 145  
RL: DEV (Device component use); MOA (Modifier or additive use); USES  
(Uses)  
(overcoat layer; ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)
- IT **172785-53-4P**, Acrylamide-3-(N,N-dimethylaminopropyl)acrylamide-trimethyl-3-(acryloylamino)propylammonium chloride-trimethyl-2-

(methacryloyloxy)ethylammonium chloride copolymer

RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP****(Preparation)**; USES (Uses)

(ink-jet recording materials having quaternary ammonium salt-containing polymer ink-absorbing layer with good gloss and transparency)

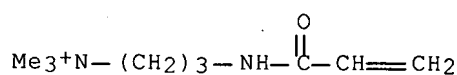
RN 172785-53-4 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with N-[3-(dimethylamino)propyl]-2-propenamide, 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

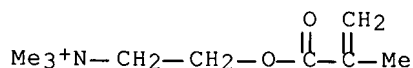
CMF C9 H19 N2 O . Cl

● Cl<sup>-</sup>

CM 2

CRN 5039-78-1

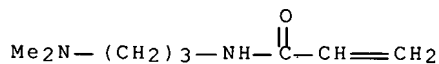
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 3845-76-9

CMF C8 H16 N2 O

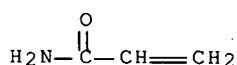


CM 4

CRN 79-06-1

CMF C3 H5 N O





L40 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:541461 HCAPLUS Full-text

DN 119:141461

TI Strengthening agents for paper

IN Nagoshi, Eiji; Moriwaki, Hisakazu; Kondo, Junji

PA Kao Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 05071099	A	19930323	JP 1991-227011	19910906
	JP 2983713	B2	19991129		
PRAI	JP 1991-227011		19910906		

AB The title agents are prepared by polymerizing cationic acrylic monomers bearing C4-28 hydrocarbyl-containing quaternary ammonium groups and hydrophilic acrylic comonomers. Thus, the agent was prepared by AIBN-initiated polymerization of acrylamide 21.4, 3-dimethylaminopropylacrylamide 5.2, and 2-hydroxy-3-methacryloyloxypropyldimethylstearylammmonium chloride 8.0 parts.

IC ICM D21H017-37

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

ST strengthening agent papermaking acrylamide polymer; cationic anionic acrylamide polymer strengthening agent

IT Paper

(strengthening agents for, cationic acrylic monomer-based copolymers as, manufacture of)

IT Quaternary ammonium compounds, polymers

RL: PREP (Preparation)

(polymers, strengthening agents for paper, manufacture of)

IT 117908-83-5P 150048-70-7P 150048-71-8P 150048-72-9P

RL: PREP (Preparation)

(strengthening agents for paper, manufacture of)

IT 117908-83-5P

RL: PREP (Preparation)

(strengthening agents for paper, manufacture of)

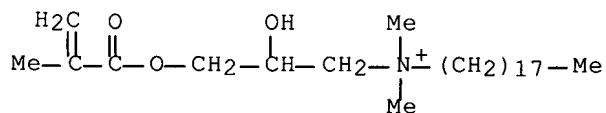
RN 117908-83-5 HCAPLUS

CN 1-Octadecanaminium, N-[2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]-N,N-dimethyl-, chloride, polymer with N-ethyl-N,N-dimethyl-3-[(1-oxo-2-propenyl)oxy]-1-propanaminium ethyl sulfate and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 34386-94-2

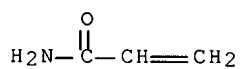
CMF C27 H54 N O3 . C1



CM 2

CRN 79-06-1

CMF C3 H5 N O



CM 3

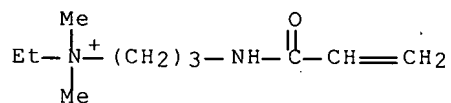
CRN 117908-82-4

CMF C10 H21 N2 O . C2 H5 O4 S

CM 4

CRN 117908-81-3

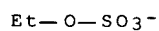
CMF C10 H21 N2 O



CM 5

CRN 48028-76-8

CMF C2 H5 O4 S



L40 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:473330 HCAPLUS Full-text

DN 119:73330

TI Process for the preparation of dispersion of water-soluble cationic polymer

IN Takeda, Hisao

KATHLEEN FULLER EIC1700 571/272-2505

PA Hymo Corp., Japan  
 SO Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 525751	A1	19930203	EP 1992-112954	19920729
	EP 525751	B1	19970625		
	R: DE, ES, FR, GB, NL, SE				
	JP 05032722	A	19930209	JP 1991-211309	19910730
	CA 2074758	A1	19930131	CA 1992-2074758	19920728
	CA 2074758	C	20020604		
	AU 9220598	A	19930204	AU 1992-20598	19920729
	AU 657556	B2	19950316		
	ES 2103015	T3	19970816	ES 1992-112954	19920729
	CN 1084859	A	19940406	CN 1992-111157	19920930
	CN 1042037	B	19990210		
PRAI	JP 1991-211309	A	19910730		

AB Copolymn. of a cationic quaternary monomer (obtained by quaternization using alkyl halide or 2-haloethylbenzene) with another cationic monomer and/or (meth)acrylamide in a salt solution, which does not dissolve the product and in the presence of a cationic polymer dispersant soluble in the salt solution, gives cationic polymer useful as a flocculant or dehydrating agent in waste water treatment and paper manufacture Addition of acrylamide 65.8 and acryloyloxyethyltrimethylammonium chloride (90% aqueous solution) 26.9 to a dispersant solution containing acryloyloxyethyltrimethylammonium chloride homopolymer 2.7, ammonium sulfate 112.3, and water 392.3 g, heating to 50°, adding initiator, and polymerizing at 50° for 10 h with stirring gave finely dispersed particles in salt solution having a viscosity (25°) 2500 cP.

IC ICM C08F020-60

CC 35-4 (Chemistry of Synthetic High Polymers)

ST acrylamide copolymer cationic prepn; acryloyloxyethyltrimethylammonium chloride polymn dispersant cationic; acryloyloxyethyltrimethylammonium chloride copolymer prepn

IT Polymerization

(of cationic monomer in salt solution using salt-soluble cationic polymer dispersant)

IT 26161-33-1 54076-97-0 69418-26-4, Acrylamide-acryloyloxyethyltrimethylammonium chloride copolymer

RL: USES (Uses)

(dispersant, for polymerization in salt solution)

IT 148912-51-0P 148912-52-1P 148912-54-3P 148912-56-5P

RL: PREP (Preparation)

(preparation of, finely dispersed particles in salt solution)

IT 148912-52-1P 148912-54-3P

RL: PREP (Preparation)

(preparation of, finely dispersed particles in salt solution)

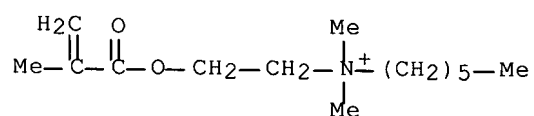
RN 148912-52-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-1-hexanaminium bromide and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 107451-16-1

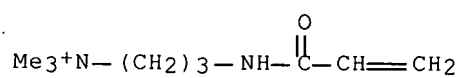
CMF C14 H28 N O2 . Br



CM 2

CRN 45021-77-0

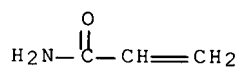
CMF C9 H19 N2 O . Cl



CM 3

CRN 79-06-1

CMF C3 H5 N O



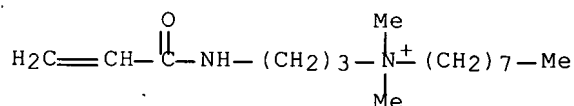
RN .148912-54-3 HCAPLUS

CN 1-Octanaminium, N,N-dimethyl-N-[3-[(1-oxo-2-propenyl)amino]propyl]-, iodide, polymer with 2-propenamide and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 148912-53-2

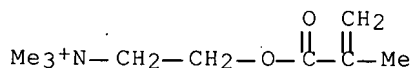
CMF C16 H33 N2 O . I



CM 2

CRN 5039-78-1

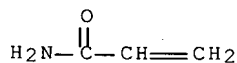
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 79-06-1

CMF C3 H5 N O



L40 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1990:632272 HCAPLUS Full-text

DN 113:232272

TI Preparation of copolymers of acryloyloxyhydroxypropyltrialkylammonium chlorides and vinyl monomers for flocculants

IN Larson, Eric Heath; Shultes, Benjamin, III; Chiang, William Gong Jeann

PA Polypure, Inc., USA

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 371822	A1	19900606	EP 1989-312527	19891130
	EP 371822	B1	19960814		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2004244	A1	19900531	CA 1989-2004244	19891130
	AT 141296	T	19960815	AT 1989-312527	19891130
	US 5132383	A	19920721	US 1989-456339	19891226
	JP 03203916	A	19910905	JP 1989-338821	19891228
PRAI	US 1988-278301	A	19881130		

AB The title polymers, with intrinsic viscosity >5 dL/g are prepared by polymerizing vinyl monomer mixts. containing 3-methacryloyloxy-2-hydroxypropyldimethyleneamine-2-methacryloyloxy-3-hydroxypropyldimethyleneamine salt mixts. [prepared by reaction of epichlorohydrin with CH<sub>2</sub>:CR(CO<sub>2</sub>H) (R = H, C1-4 alkyl), then quaternization with trialkylamines.]. A mixture of 50% aqueous acrylamide solution 8.0, 60% aqueous 3-methacryloyloxy-2-hydroxypropyltrimethylammonium chloride mixture solution 18.33, 1% Versenex 80 0.24, succinic acid 1.0, deionized H<sub>2</sub>O 272.42, and Wako VA044 0.040 g was purged with N at .apprx.70°F for 24 h, giving a

KATHLEEN FULLER EIC1700 571/272-2505

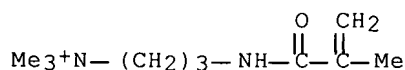
viscous liquid containing .apprx.5% copolymer with intrinsic viscosity 6.0 dL/g.

- IC ICM C08F220-36  
ICS C07C213-08; C07C219-08
- CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 60
- ST acryloyloxyhydroxypropyltrialkylammonium chloride copolymer flocculant;  
acrylamide copolymer flocculant
- IT Flocculating agents  
(acryloyloxyhydroxypropyltrialkylammonium chloride-vinyl monomer  
polymers for)
- IT Polymerization  
(of acryloyloxyhydroxypropyltrialkylammonium chlorides and vinyl  
monomers, for preparation of flocculants)
- IT Quaternary ammonium compounds, polymers  
RL: PREP (Preparation)  
([(acryloyloxy)hydroxypropyl]trialkyl, chlorides, polymers, with vinyl  
comps., preparation of, for flocculants)
- IT Wastewater treatment  
(flocculation, acryloyloxyhydroxypropyltrialkylammonium chloride-vinyl  
compound copolymer agents for)
- IT 13052-11-4P, 3-Methacryloyloxy-2-hydroxypropyltrimethylammonium chloride  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polymerization of)
- IT 13159-52-9P, 3-Chloro-2-hydroxypropylmethacrylate 109573-57-1P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction of, with trimethylamine)
- IT 28474-62-6P 130319-62-9P 130319-63-0P **130319-64-1P**  
RL: **PREP (Preparation)**  
(preparation of, for flocculants)
- IT 75-50-3, Trimethylamine, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chlorohydroxypropyl methacrylate)
- IT 79-41-4, Methacrylic acid, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with epichlorohydrin)
- IT 106-89-8, Epichlorohydrin, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with methacrylic acid)
- IT **130319-64-1P**  
RL: **PREP (Preparation)**  
(preparation of, for flocculants)
- RN 130319-64-1 HCAPLUS
- CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-  
propenyl)oxy]-, chloride, polymer with 2-propenamide and  
N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium  
chloride (9CI) (CA INDEX NAME)

CM 1

CRN 51410-72-1

CMF C10 H21 N2 O . Cl

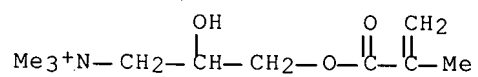


● Cl<sup>-</sup>

CM 2

CRN 13052-11-4

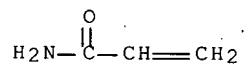
CMF C10 H20 N O3 . Cl



CM 3

CRN 79-06-1

CMF C3 H5 N O



=&gt;